

THE
AMERICAN FARMER:
DEVOTED TO
Agriculture, Horticulture, and Rural Economy.

[ESTABLISHED 1819.]

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." Virg.

Sixth Series.

BALTIMORE, JULY, 1867.

Vol. II.—No. 1.

J U L Y .

"Who listens now, can hear the streams
Leap tinkling down their pebbly bed—
Or see them, from their fetters free,
Like silver snakes the meadows thread.
The joy, the life, the hope of earth,
They slept awhile, they were not dead:
O thou who sayest the sere heart ne'er
With verdure can again be spread—
O thou who mournest them that sleep,
Low lying in an earthly bed—
Look out on this reviving world,
And be new hopes within thee bred!"

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Gossip from the Farm.

Of Weeds, Grass, Clover, Strawberries, Ayrshire Cows, &c.

Good Farmer: Though you send out this gossip not till July, it is written, of course, in the merry month of June, the very season of life and beauty, of singing birds, and roses, and honeysuckles, and of all the thousand activities of woods and fields; and never has her ladyship put on more glorious apparel, or shone more resplendent in shade and sunlight. In the freshness of the early summer morning, mere existence is a luxury, and if contentment were possible, a man might be satisfied, it would seem, to stop just here, and go no further to be happy. But it is only life and movement that accords with his restless spirit, and that which gratifies him most in this apparent country quiet, is, after all, the unceasing, unresting procession of the numberless forms of life, which bear him along, almost unconscious, in their resistless movement.

This peculiar season has demanded skilful and earnest work to keep up with the demands of the farm. Never did grass grow more vigorously,

and with the delays and interruptions of the frequent rains, there has been more of that commodity than could be well managed. What we suffer in our cultivated fields, let it be hoped, will be compensated in the grass lands proper.

But this grass land proper, I find sorely beset with weeds, ambitious of supremacy. A clover field of otherwise very respectable condition, is overtopped by the Ox-eye Daisy, which, with its bloom of white, enlivens the landscape. Briers, indicating a peculiar suitableness of the soil for a Blackberry crop, dispute possession too, and minor intruders are ready to take any spare room which may be allowed them. Now all this is not as it should be, but what can be done? It is easier to say what should be done. By the first day of July, every acre so infested should be cut over, if there be clover or grass on it worth cutting, and if not, the whole growth should be ploughed deeply under before a seed matures. These should be the first steps in a course of active cropping, in which every field, or division, should be, in turn, subjected to two successive hoed crops, both well manured. During this cultivation all necessary drains should be opened, a depth of surface soil not less than eight inches obtained, and a subsoiler used once, as far as practicable. Such working, followed by a grain crop and a thick sowing of clover seed, would insure so heavy a growth of clover, as would give little chance for volunteer intruders; and mowed in due time would prevent further increase from seeds. If permanent grass be wanted, it should be orchard grass sown with the clover, and cut when it comes in bloom. Farmers would suffer, I believe, no such evil as this I am deprecating, if high culture and early mowing was the rule. Timothy is not a suitable grass crop

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Mr. Deptt



for lands so infested, because it allows the seeds of weeds to ripen, yet I have been assured, that abundant top-dressing alone, that would bring up a crop of Timothy to two tons to the acre, would drive out the Daisy. My own experience with it is new, and will not, I hope, be long.—The two successive years' cultivation in hoed crops, is less on its account, than for getting rid of blue grass and briars, and making a clean bed for clover. No system of improvement satisfies me that hasn't clover for its corner stone; in which it is not, indeed, the beginning and the ending. +

Yet what a "weed" is clover, what a nuisance, to the Strawberry grower! So true it is, that "one man's meat is another man's poison." Our Anne Arundel county friends, some of whom have a hundred acres in strawberries, are very much troubled to keep the clover from growing. It overgrows their strawberries, and compels them to make new plantations sooner than they wish.

Let me wonder, if these enterprising cultivators, who are entitled, I believe, to the credit of being pioneers in the field culture of this fruit, and in whose fields I have seen gangs of from two to three hundred pickers,—let me wonder if they have changed their practice for the high pressure system, that brings double the quantity of fruit per acre, and for the increased crop gets more than four times the price. I wish to know, too, whether they have yet adopted any of the twenty wonderful kinds that are lauded in Pomological Conventions, or the hundred kinds of the fruit growers' catalogues, or still stick to their little Native, that hasn't a name, or a "local habitation," so far as I know, away from the neighbourhood of Baltimore. I promised last month to take account of some of these settlers among us, and compare their qualities. While I know well the value of the "Stewart" on its native grounds, it happens, by accident, that I have not a plant of it now growing, with which to compare a large assortment, some of which have exhibited this season a magnificence of proportions, and excellency of quality, combined with fruitfulness and hardiness, that would seem to leave nothing to be desired. *Triomphe de Gand*, *Fillmore*, *Jucunda*, *Russell's Prolific*, *Vicomtesse Hericart de Theury*, and half a dozen yet unnamed, make only some of the numerous sorts that vie with each other for fame.

Strawberries naturally suggest cream, and cream, milk, and both, Ayrshire cows. I notice a slight indication this month, that Ayrshires may come soon "in fashion"—farmers have fashions as well as their wives and daughters.

Three journals for the month of June have articles laudatory of this breed. A Massachusetts dairyman, in the *Stock Journal*, among other things, says, "They are not a large breed, but keep easy. As near as I could judge, in keeping Ayrshires by the side of grade Durhams, two of the Durhams would consume as much food as three of the Ayrshires, and two Ayrshires would give as much milk as three of the Durhams. The milk of the Durhams varies a good deal in quality, some of it being hardly fit for an honest man to serve to his customers if he expected to retain his good name. But the milk of the Ayrshires is of very uniform and good quality." *The Farm and Fireside*, of Philadelphia, gives a handsome portrait of an Ayrshire cow, and a sketch of the history and characteristics of the breed. Morris' *Practical Farmer*, noticing a very fine Ayrshire bull, remarks, "It is rather singular that the Ayrshire breed of cows, celebrated elsewhere both for quality and quantity of milk, and believed by many to excel in these particulars all other breeds, should be so little known in the dairy section within fifty miles of Philadelphia—for the dairy, they may yet be *proved to be the breed*." Let me add that all that is said in their favour is well said. They are hardy, easily kept, handsome and good milkers, and on the whole, and for the several purposes of such farm stock, better suited, I think, than any other one breed. I will, therefore, deliberately give a helping hand to bring the Ayrshires into fashion, and hope to see them increase and multiply whenever a handsome and profitable cow is appreciated. Wishing your old and new subscribers great success in paying their bills, I am, theirs and yours truly, &c.

Quantity per Acre of Seed.

We give the following for reference:

Grain Drilled.—Wheat, 1½ to 2 bushels; rye, 1½ to 2; oats, 2½ to 3; barley, 2½ to 3; barley and oats, 1 bushel of oats to 2 bushels of barley; peas, 2 to 3 bushels; buckwheat, half to two-thirds of a bushel; corn, in hills, 6 to 8 quarts; in drills, for fodder, 2 to 3 bushels; broadcast for fodder, 3 to 4 bushels; broom corn in drills, half to three-fourths of a bushel; beans, 1 to 1½ bushels; sorghum, half to three-fourths bushel.

Grasses.—Timothy, 8 to 12 quarts; orchard grass, 1½ to 2 bushels; red-top, 12 to 16 quarts; Kentucky blue grass, 2 bushels; white clover, 4 to 6 quarts; millet, half to three-fourths; lucerne, 8 to 10 pounds; red clover, 8 to 10 lbs.

Vegetable and other Seeds.—Beets, 4 to 5 pounds per acre; carrots, 2 pounds; ruta baga, three-fourths to one pound; tobacco, two ounces; cotton, 2 to 5 bushels; turnip, 1 to 2 pounds; onions, 3 to 4 pounds.—*Rural N. Yorke*.

Farm Work for the Month.

THE HARVEST.

The great work of the season, not yet finished, demands now the closest attention, and the most active labours of the farmer. It is hoped that, guided by our hints, and his own good judgment, he has put every thing else in such condition, that he may not be drawn off by side issues from what his personal interest, and the interest of the whole population of the country, makes now his paramount duty—the making safe the great crop which we trust has come to maturity unscathed by the enemies whose name is legion. Never did our people so need abundant bread as now. Never has the good Providence who charges himself with our supplies of sustenance, so made us to feel our dependence upon Him.—While we write this, there is yet time for the blasting, which may ruin the rich hopes that cheer us; but we trust His goodness, and bid our friends be of good cheer, and gird themselves to take care of the abounding crops we hear of everywhere.

SECURING IN THE FIELD.

The readiest and safest way to put up wheat in the fields, is in the small bunches called "dozens." Let the young farmer learn from his experienced neighbour, or wherever he can, how to make these bunches most secure, and they will be found less liable to damage than the shocks which are commonly resorted to. Bind firmly, set the sheaves well together, upright, *not leaning*, pressing the heads well in while the cap sheaf is firmly set on.

HAY MAKING.

Clover and Orchard Grass will have been harvested by this time. The red top, known among us as Herd's grass, will be now fit for the scythe. Our low grounds are liable to be flooded about the middle of July, and the crop from these should, therefore, be saved first—but for this reason, the red top will wait your leisure longer than other grasses.

TIMOTHY.

Timothy requires peculiar treatment. It must not be cut when in blossom, as other grasses, but makes the best hay, "after the seed is formed, and is full in the milk." It will be then heavier and more nutritious. It must not be mown very close to the ground. Four inches of stubble should be left. This prevents the destruction of the crowns of the tuberous roots, and so maintains a good stand on the ground. The contrary course is the cause, perhaps, of this grass "running out."

MILLET AND HUNGARIAN GRASS.

Either of these may be still sown, and a good crop of hay made.

BUCKWHEAT.

Have ground in readiness, and sow by the 15th of the month. It proves a great convenience to the farmer to be able, at so late a period, to make up deficiencies in his principal grain crops, by sowing Buckwheat; a grain easily grown, and very good for feeding stock of all sorts. Half a bushel of seed to the acre is sufficient. Plough well and manure moderately, if the ground be poor, with some good superphosphate.

CORN CULTIVATION.

If our oft-repeated injunctions have been followed, Corn is "laid by." If not, beware of the destruction of those great ramifications which occupy every inch of surface, and which were designed for this especial period of the growth of the crops. If there is grass that ought to be killed, there is Corn that may be killed, and you must exercise your own discretion as to how and when you should work it, or whether at all.

TOBACCO.

This is an important month for the Tobacco crop. Supposing the planting to be finished, the "weeding" and early working will demand attention. The hoeing—clearing off the whole surface and every sprig of grass from the hill—needs to be done with great care, as many plants are destroyed by the operation. The early horse hoeing, or ploughing, should be a deep one, that will encourage the roots to strike well into the ground. This encourages a low, spreading growth early in the season, which is very much to be desired.

WORMS.

When worms come, as they come sometimes, it is serious business with the planter. In this month they are not usually so numerous, and are more easily controlled, but they should be diligently destroyed, lest a second crop that comes in August or September, when the plants are well grown, prove too much for him. A good flock of turkeys in charge of a woman, will keep them under now.

POTATOES.

It is not too late to plant Irish Potatoes, if you have not a full crop in the ground.

RUTA BAGA.

Sow Ruta Baga seed for stock to the full extent of your wants. If you cannot get a good stand by the 5th of August, sow the purple top white turnip from that time to the 20th.

STOCK.

Keep all stock well supplied with salt—a lump of rock salt in the field is best. For cows and horses, a cool, dark stable is the best place, during the heat of a summer's day.

The Vegetable Garden.

Prepared for the American Farmer, by DANIEL BARKER,
Maryland Agricultural College.

J U L Y .

Asparagus.—We would advise to desist from cutting any more of this crop unless the mind is made up to the policy of killing the goose, &c. Where the beds have been neglected, they should be at once cleared and the surface covered with good rotten dung, (not manure rotted to a powder.)

Celery., newly planted, will require an abundance of water. Plant out a good breadth for a main crop whenever circumstances are favorable. Earth up those sufficiently advanced and prick out in a moist situation from those last sown.

Cabbage and Cauliflower.—Continue to plant out and work well all advancing crops.

Beans.—Plant a few Early Six-Weeks, or Mohnhawk. If of no other use, they will make good pickles. Earth up advancing crops and pinch out the tops from Lima and other pole varieties.

Brussel's Sprouts.—Continue to make plantations for winter and early spring use.

Endive.—Plant out from the seed beds and sow for succession.

Parsley.—Sow for a winter crop.

Leek.—Continue to transplant and gradually earth up those planted in trenches, to blanch as they advance.

Lettuce.—Plant out from the seed beds of last month. Hoe and stir the ground, and water when necessary the advancing crops.

Peas.—Earth up, and put branches to advancing crops.

Radishes.—Continue to sow the turnip rooted varieties of Radishes in a cool situation, and thin out those advancing. Sow also the Black Spanish for winter use.

Spinach.—Continue to make sowings of the round.

Sweet Potatoes should be kept free from weeds, and where the vines have not become too much matted together, the ground should be kept well cultivated.

During the first week in the month we venture to make a standing of the early sweet Corn, being the last of the season.

This department will now require a general clearance of all plots which have borne crops of Peas, Beans, &c., to burn up all dry weeds and fork up and apply manure whenever necessary. Late crops of Cabbages and other winter crops will do much better where the ground is well spaded or ploughed than with a mere scratching of the surface. Store away at once all pea sticks worth keeping, to preserve tidiness and prevent waste. Mint, Sage and Savory should now be cut for drying. Liquid manure at this season will be found very serviceable. During the present month every advantage should be taken to make sure of an abundance of fall and winter Greens, of which there will be a scarcity where people are neglectful of adapting their garden operations to the changes of the weather. Your first business in this department during the present month, should be to attend to the succession of crops of all kinds on which you will have to be dependent for a supply of vegetables during the ensuing winter and spring. As the Peas, Potatoes, &c., are cleared off, attention should be given to the ground they occupied at once. The first thing to be done is to sow some Early York Cabbage, which in due time the most forward plants may be drawn and planted out, which will make nice Greens during the autumn months.

Scotch Kale or German Greens should be sown at least twice from this time. Bruskel's Sprouts planted out now will mostly be used before Christmas, and should be planted in highly manured ground. Those to stand till next spring, to furnish Sprouts, we have found stand best where the ground is not manured, as it renders them less able to withstand severe frost.

At a late discussion of the Little Falls, N. Y., Farmers' Club, Mr. Whitman said, I wish to raise a good crop of herds' grass, and do not care to sow clover. It is difficult to cure. But when I get ready to raise clover I shall do so, but that will not be until cotton cloth is cheaper. I want a hay stool standing two inches from the ground, and a hay crop. Then I can put my clover upon the stool, and cover it with the hay cap, and let it cure out. In this way the leaves are saved and good hay made.

WHEN TO APPLY PAINT.—Paint, to last long, should be put on early in winter or spring, when it is cold and no dust flying. Paint put on in cold weather forms a body or coat upon the surface of the wood that becomes hard and resists weather or an edge tool even, like slate.

The Fruit Garden.

Peaches and Nectarines grown in tubs or pots should now be fully exposed to the atmosphere, as hot sunshine and close air, under glass, will spoil the flavor and cause the fruit to drop. Stop the strongest shoots, a few at a time, about one-third of their length, in order to swell and ripen their buds. Trees from which the crop has been gathered should be liberally supplied with water and syringed, to keep the foliage clean and fresh until it has completed its work. Trees potted during the spring should have every necessary attention to complete their growth and ripen their wood. The pruning off useless growth should not be deferred until the sap is down. The pots or tubs containing the tree should be sunk half their depth in a border well exposed to the sun, that the wood may ripen perfectly.

The bushes and canes of small fruits will require attention, as soon as the crop is gathered, by thinning the present year's growth and giving them their final shape for fruiting next year.

Thin out the canes of Raspberries, leaving only about four to each shoot, and as soon as the fruit is off, cut all the old canes down to the ground, leaving the new ones exposed, that the wood may become well ripened. Mulching the ground with rotten manure will be of great benefit to the future crop, but do not disturb the soil more than to remove the weeds.

Special care should now be taken to secure good Strawberry runners, either for pots or planting out. Those who mulched their Strawberry plantations in the spring, will find the runners rooting freely in the mulch, but where the runners have to rest upon soil as hard as rock, they will be very slow in making roots, and where new plantations are to be made, it is generally late in the season ere good rooted runners can be procured.

Now that the crop is picked, the most delicately minded person can have no scruples to bestow upon the Strawberry beds copious waterings of liquid manure, which will help the runners and swell up the fruiting crowns for next year. In no kind of weather should a drop of sewage water be wasted; it cannot be bestowed with more beneficial results than upon Strawberry plantations. In fact, should hot, dry weather occur, and the plants have no help, they must be deteriorated, for a plant cannot live on itself for any length of time. Those who want good rooted Strawberry runners, in a dry season, must put themselves to some trouble to get them. The first requisite is plenty of water; the next, a good mulching of some light absorb-

ent material for them to root in. In preparing a stock of plants for fruiting in pots next season, we select the first and second plants on each runner of the varieties to be propagated, as the best for strong fruiting plants. Our method has hitherto been to remove a small portion of earth from beneath the runner, and replace it with rotten dung, and a stone is laid upon the runner to keep it in its place. With due attention to watering, &c., these will very soon make plenty of roots, and may be taken up without hurting a root and planted at once into their fruiting pots, or upon the beds where they are to form new plantations. The grand essential with Strawberries, to be fruited in pots next season, is to have the crowns well formed previous to winter. Hence the earlier they are potted the better.—Our practice in planting Strawberries is, not to wait for a storm, but as soon as the first lot of runners becomes well rooted, to plant them in ground well manured, shading with small cedar branches for a week, and keep well watered. These will grow at once and form good crowns and give a fair crop next season. Lay all the runners which are wanted, removing them as soon as rooted, as they will do much better upon their own roots and distress the parent stock less. Prepare ground for new plantations by manuring and trenching it, or if land cannot be had and prepared at once, select the strongest runners and plant them on a shady border, in good rich soil, to be transplanted with balls next month.

Keep the canes of Blackberries tied up, and cut off each at a height of about five feet, which is by far a better practice than to let them run wild.

Keep Grape vines tied up, and plant out those in pots which will produce good canes, which, under ordinary circumstances, will ripen their wood before winter. What has been said in former numbers of the "Farmer" about the preparation of the ground for Grape vines, we believe to be right enough, and it is always well to use such precautions for success, but we have been told of many instances of great success where no preparation had been resorted to, but the vines were planted at once in the natural soil. An amateur can, perhaps, do such a thing and risk the consequences, but the man whose living and reputation depend on success, must not risk such a primitive way of planting the Grape vines. Not unfrequently have we seen large holes made by taking away good soil and the space filled in with a mixture of pond mud, dead animals and other kinds of filth, in which no Grape vine could live, much more flourish. So long as good drainage is secured, it is a good plan to let well alone.

We have seen hundreds of young vines ruined by an abundance of raw manures and excessive early cropping, much more so than by bad soil. No Grape vine will flourish for any lengthened period in stagnant moisture, or with their roots deep; vines which are celebrated for their fertility we have invariably found their roots to be within a few inches of the surface. In addition to the mulching, &c., which we have before alluded to, we would advise a sprinkling of bone dust over the vine borders, to be washed in by the rains, as from what we have seen and heard, the crops of Grapes are usually left too heavy. The vine under such circumstances will be much benefitted by an application of bones, soap suds, and a good dose of manure water—none of which will be so liable to injure as guano and other highly concentrated manures.

New Strawberries.

I am always delighted with a strawberry gossip, one of which I had the other day with Mr. Wm. Saunders, of Washington. I fully agree with him that it takes time to find out what are really good and improved varieties, especially when we speak of endurance and well doing under adverse circumstances, bearing in mind that all our foreign kinds are sent from Europe upon sufferance, and our experience teaches us they are very volatile things. It takes several seasons to find out strawberries that are *good under adverse circumstances*. We have a few which must be conceded are good, such as Jucunda, Triomphe de Gant, Victoria and others, to which we think may be admitted "Sir Joseph Paxton," imported by Mr. John Saul, of Washington, during the spring of 1866, and fruited (so far as we are aware) for the first time in this country upon the grounds of the Maryland Agricultural College. "Sir Joseph Paxton" promised early to be a good cropper and very handsome fruit; size from medium to large, and we think excellent flavor.* More I cannot say at present until I see it go through a hot summer and severe winter.

*We saw and tasted the "Sir Joseph Paxton," and quite agree with Mr. Barker as to its good promise. Its handsome, regular outline, very fine colour, and remarkable fragrance impressed us. A little over-ripeness of the specimens we tasted did not allow a just estimate of the flavour.—Ed.

 In Brittany, the milk of the previous evening is mixed with the morning's milk, and, after standing a few hours, the whole is churned, and is said to produce a large amount of butter, of a better quality, and will keep longer than that treated in the usual manner.

The Flower Garden.

The principal work here for the present month will be mowing, rolling, hoeing and raking.—Chrysanthemums in pots and the open border will now require plenty of manure water. The tops should never be allowed to wilt, for whenever that takes place, it is at the expense of the lower foliage, a portion of which droop and die.

Where dwarf plants are desired to flower in pots, now is a good time to layer the young shoots into small pots. If the top of the shoot is twisted before laying, it will soon strike root, and will make nice dwarf plants for filling vases, &c.

Roses—all suckers should be removed and the bottoms kept clean of all wild shoots. Remove all decayed flowers and seeds, and give the fall flowering kinds plenty of manure water, in order to keep them in vigorous growth, which we have found to be the only means whereby to secure an abundance of fall bloom. Budding may be done towards the end of the month. Plants infested with green fly should have a liberal washing with tobacco water. About this season mildew sometimes becomes troublesome. We have managed to keep it in check by applying sulphur when the foliage is wet. The climbing Roses should be looked to for the purpose of removing decayed wood, blooms, &c. Any weakly wood should be cut out, and the strong young shoots of the present year be laid in, which will produce an abundance of bloom next season.

Carnations and Pinks should now be layered. These are exceedingly useful and beautiful flowers, so much prized for cutting, and are becoming *very fashionable*.

Hyacinths, Tulips, Crocus, with many other spring flowering bulbs, should all be out of the ground as directed last month—being in the ground, they may emit fresh fibres, and if taken up at that time, they are likely to be worthless.

Pansies, to flower in the fall, should now be propagated from cuttings of young wood. The old stems are quite unfit for the purpose. Keep the cuttings shaded and sprinkle frequently.

Dahlias keep well tied up to the stalks, and give a good mulching after the surface has been well stirred. Mulching is said to harbor vermin, which this season in particular we have found to be the case, but practically its few disadvantages are much more than balanced by the superior health of the plants and the beauty of the flowers, and moreover, the labor of watering is got rid of.

Plants growing in baskets and vases are generally elevated above the surrounding surface, and

therefore much exposed to the sun's rays. Put on these a layer of moss, to prevent excessive evaporation, which will save labor in watering and be of much benefit to the plants.

Specimen Fuchsias in pots should be attended to daily, as inattention to watering will cause the foliage to drop and render the plants very unsightly.

Many choice plants will soon be perfecting their seed, and whatever is required for future use must be secured in time. It is safest to collect the seed before it is dead ripe, as in many cases the seed vessel opens and the seed is lost. Cut off the heads with a portion of the stem attached, and spread them on paper, under cover, for a day or two to dry, and then expose them in the full sun to harden. To prevent mistakes, label all seeds when gathered, and of all hardy herbaceous plants sow a portion at once.

Geraniums—We have now many varieties of this useful and beautiful bedding plant which should now be propagated for next year, using cuttings of only two or three joints in length, planted in a partially shaded border. By being planted and rooted early, there is time for the plants to make good ripe wood before winter, which will flower beautifully in May instead of having to wait until July for flowers. Go over all the flower beds frequently and keep all the plants nicely regulated and pegged down until the surface is fairly covered; after which, more freedom of growth may be permitted.

The Cattle Plague in Holland.

The Dutch Minister of Internal Affairs has presented his second report on the cattle plague to the King. It appears from it that since June, 1865, when the plague first appeared in Holland, 90,469 head of cattle have been attacked by it. Of these 39,595 died, 17,460 were killed, 32,080 recovered, 1,403 remaining under treatment on December 3d, the date of the report. The total of the losses accordingly amounts to 55 1-5 per cent of those seized. Nearly two-thirds of the whole perished in the province of South Holland, nearly one-third in Utrecht, and the small remainder in North Holland.

No small aggravation of the calamity is attributed to the deplorable state of the veterinary profession in Holland, where anybody can set up in this line on paying five florins for a patent.

In Bregenz, one Herliman, a dealer, who, by his carelessness in importing infected cattle, caused the murrain to spread from Tyrol to Vorarlberg and Switzerland, has just been sentenced to six months imprisonment, and a fine of eight hundred florins.

For the American "Farmer."

Employers and Employed.

We have said in the June number of the *Farmer* that the labor question was an engrossing one, and that much depended upon a systematic arrangement of help, &c. We would now suggest rules for the efficient management of such gardens as require much manual labor—the first of which is, let the help provided for the garden be kept to that work. We do not mean to be understood that such help should not be taken from that department in cases of emergency, such as at haying and harvest time; we mean that the help should not be taken from the garden for everything which may be wanting about the estate, when it frequently happens that a boy at \$6 per month can accomplish as much, within a given time, as a man at \$20; and whatever outside work there is to do, the overseer should have a clear understanding of it, so as to enable him to regulate his work accordingly. Without such an understanding, he can never depend upon his help, and it becomes absolutely impossible that there can be mutual satisfaction between employers and employed. We can fancy a man with some ten or more hands, when in the early spring and summer months he finds that he has rarely more than three and frequently not more than one, himself willing to get forward, will toil from early to late for a time; but will he continue to do so? Can it be expected he should? If worth anything he will not. In the second place we would suggest that employers interfere as little as possible with the assistants of the overseer, such as taking them from the work he has appointed for them to do. We have always found that such divided command upon an estate will soon destroy alike discipline and responsibility. We would not have it understood that we question the right of the employer to employ as he pleases the help on his property; but we question the propriety for his own interest, unless he is his own manager. To the great advantage of many in this country, there are many ladies and gentlemen who manifest a great and growing interest upon matters pertaining to horticulture, floriculture, &c., and enter upon it with great zest, taking great pleasure either in doing the work themselves, or having it done by a reliable man of their own choice. This is as it should be, and deserves great commendation; but we maintain if the machinery of management is to go right, there should be an efficient man appointed as the head, next to the proprietor, to whom it should be understood that every other man upon the estate should be subject; and when-

ever any help is required the overseer should be applied to for it, instead of others exercising the right of taking help indiscriminately from the work assigned them. In what we have said upon this subject, we have been studying the *employers' interest*, and we make bold to say from practical experience, if these rules are clearly acted upon and carried out, that there will be much more satisfaction between employer and employed and much fewer short servitudes—one great bane to improvement in horticulture in this country.

DANIEL BARKER.

For the "American Farmer."

Large Farms and Associated Capital.

MESSRS. EDITORS: In the May number of the *Farmer* just at hand, I have read, with much interest, Mr. L. A. Hansen's article under the above heading. My February number of the *Farmer* having miscarried, I did not see the suggestions of H. H. Mr. Hansen concluded his article thus, "My hearty wish is that the experiment may be tried. If it should succeed, it certainly would become a blessing to our country." I here endorse Mr. Hansen's views fully; and I can assure him that the "principal obstacles" can be easily and satisfactorily overcome, that is, "to find *able* and *honest* superintendents." There are many of our able, honest, intelligent, practical and scientific planters, here at the South, who have had the experience of twenty to thirty years of successful management of thousands of acres, with many hundreds of laborers. These gentlemen may be employed as superintendents. There are overseers too who are every way capable, and are accustomed to manage under the direction of these gentlemen superintendents. We have every requisite at the South for trying the "experiment," *except* the capital.

The advantage of a large over a small rice plantation is very decided. A plantation of two thousand acres would require no more than one first-class steam thrasher, costing about fifteen thousand dollars. Each of ten plantations of two hundred acres, must have a steam thrasher, at a cost of eight or ten thousand dollars. One steam dredging machine for cleaning canals and ditches, may be used to great advantage on the large plantation. The small plantation cannot afford to own and work one of these machines. The same with regard to many labor-saving machines which *must* be used to make free labor pay in the cultivation of rice as well as cotton. The negro, too, prefers working in large gangs. He knows and feels the advantage. "The experiment" of free labor has not been satisfactorily

tested. I think it will require more than *one* year. The negro is dissatisfied now. He cannot understand why he is poor, and much less comfortable than he was eight years ago. Two years of freedom has not made him rich and comfortable, (as was his calculation,) so he is dissatisfied, and is for shifting his quarters as often as possible.

Large, well organized establishments, will control the labor, (*if anything can.*) An establishment well managed, with a church, school, store, and other things necessary for the comfort and convenience of the negro, "would become a blessing to our country." There is not capital enough at the South to "try the experiment," as the Southern people know would be most likely to succeed.

DISTRICT NO. 2.

N. B.—Our prospect for cropping is *not* satisfactorily. The freedmen are disposed to put down the shovel and the hoe, and take up politics.

For the "American Farmer."

Serradella (*Ornithopus sativus.*)

MESSRS. EDITORS: For the last six or seven years this plant has been extensively cultivated in Europe. The Serradella is a native of North Africa, Spain and Portugal. These countries being most surrounded by water, shows that it thrives best in a moist atmosphere. The peculiar merits of this plant are, that it grows most luxuriantly on poor and light sandy soil. Stiff clay and wet soil is objectionable. It combines the merits of clover, esparzetti, lucerne, and, in fact, of all good grasses we cultivate. Its hay is preferred by all kind of stock to clover, and chemically analyzed, shows to contain a greater amount of nutritious matters. For turning under as manure, it also exceeds the clover, leaving more roots in the ground, and growing more luxuriantly above ground. The proper time to sow it is in wheat or rye. As the seeds require a considerable amount of moisture to germinate, it must be sown on the fresh furrow. If it is desirable to sow it by itself, it must be done as early as possible in the spring. Deep ploughing is necessary. As much moisture is required for the seeds to germinate many seeds do not sprout, and consequently it must be sown thick, say 24 to 30 pounds per acre. In the course of eight or ten days, if the season is not too dry, the young plants will appear. For a long time they remain nearly stationery, but, after the first blossoms appear, their growth is most astonishing. During this period the plant draws a vast amount of moisture from the atmosphere, even on hot days the dewdrops may be seen on the leaves at mid day.

When the plant has reached this state, dry seasons will rarely effect it. Its growth is so rapid that it will destroy all weeds, and leave the soil perfectly clean. As the seed is very apt to fall out, great care has to be taken in harvesting. As soon as the first pods turn brown, about the first of August, it has to be mown in the morning and at night, or after a rain. Leave it for 12 to 24 hours—rake it together; also, when the dew is on it, make into small cocks, and let it cure like hay. Before hauling turn the cocks gently. In hauling use a wagon with close bottom. The object is to stir it as little as possible. It is easy thrashed with flails, and easily cleaned. If Serradella is sown with grain, it will produce a ton or more of hay after the grain is cut. Serradella is not only the best feed for stock, but also the very plant to enrich poor soil.

If our farmers should show any interest in this new and very valuable plant, I will, if required, in some future time, give a full description of its culture, &c.

L. A. HANSEN.

CLIFTON, FAIRFAX Co., Va., May, 1867.

We hope Mr. H. will give us further information, and put us in the way of obtaining seed for trial.—ED.

Agricultural Schools.

Every farm and workshop ought to be a school where our sons and others can be taught to guide the plough and swing the scythe, and handle every tool in the most appropriate manner known to those skilled in their use. In the one, should be taught the nature of soils, the qualities and uses of manures, and all the minutiae of the cultivator's art; in the other, the laws which govern mechanics should be studied, and the pupil should be instructed in all the mysteries of the mechanic arts. Thus, in both should be taught all the various learning which goes to complete the farmers' and mechanics' education for the practical duties of their calling.

But their education should not be on the farm or in the workshop alone. The district schools should not be neglected. These are pre-eminently the farmers' and mechanics' colleges. They ought to be improved, and made to become such schools as are now but too uncommon, where our youth may obtain not only a good business education, but one that will fit them for all of the duties which grow out of the relations they sustain to each other, their country, and their God.—*W. B. Downer's Address.*

The Currant.

Of all the small fruits that grow in the temperate latitudes, the currant is the most reliable and costs the least labor, and for this very reason it seems to be the least appreciated. The various forms in which the currant may be used, its agreeable flavor and healthful qualities, entitle it to higher consideration than it generally receives, and should induce its more universal cultivation. In the first place, being adapted to use when green, it is one of the earliest fruits available. By the time it is half grown, if stewed in a swimming supply of water and sweetened to the taste, its mild, fresh tart, forms a refreshing relish upon the breakfast or tea table, and is to the taste, what the first notes of the early spring birds are to the ear—a prophecy of good things to come. Strawberries are delicious, and red English raspberries are luscious, and the full ripe currants, served up raw, with sugar well moistened with water, stepping in just when these step out, are scarcely less grateful to the palate; and with a little care in leaving the later bunches, the luxury may be continued from four to six weeks. And except in cases of organic disease of the stomach and bowels—when the seeds must be avoided—they are a most healthful fruit, the acid having the effect to counteract bilious and malarious tendencies, and the expressed juice, properly prepared, makes a harmless and refreshing beverage in most cases of sickness.

There is said to be great difference in different kinds of currants, in respect to yield and quality. Undoubtedly there is some difference in varieties. The white and black currant does not seem to yield as well as the red, and some reds seem, at least, to produce better than others. But much of this difference in the red currant, we apprehend, is owing to cultivation. Ground cannot be too rich for the fruit, nor kept too clean. The mode of propagating is well understood by most people. A hill of old currant bushes taken up, may be divided into a half dozen to a dozen settings, which will produce fruit a year or two earlier than cuttings. But when these cannot be obtained, cuttings of last year's sprouts—which from old hills should be mostly removed—cut any time before the buds start, and set early in good mellow, rich ground, will take root. The lower end of the cutting should be cut square with a sharp knife. The top should be cut back to a good stray bud. Dig and set the shoot—not force it into the ground. The latter process is liable to tear the bark from the end and prevent its taking root.—*Wisconsin Farmer.*

Selecting and Keeping Seeds.

The practice of selecting seed having in view the preservation and improvement of its quality, and that which tends to the same result, the increase of the fructification by the process of steeping, are both very commonly considered new ideas; and the latter especially so new as to have its value not yet determined. The selection of seeds was considered by Virgil as essential to prevent rapid degeneration, and their preparation for sowing by steeping was familiar:

"I have seen, indeed, many sowers prepare their seeds artificially, steeping them first in salt-petre and the black lees of oil, that their produce may be larger in the deceptive pods. And though, to hasten their growth, they were steeped over a slow fire, after long selection, and proved by much care, yet I have seen them degenerate, unless human industry culled them out with the hand, the largest every year. Thus all things naturally hasten to decay, and gliding away are insensibly driven backward; not unlike him who, rowing his skiff with much ado against the current, by chance slackens his arms, when the tide hurries him headlong down the stream."

Such is the testimony given near 2,000 years ago to the tendency to degeneracy of cultivated crops, and, strange to say, the lesson it teaches is not yet well learned. It is only what we call especially enlightened cultivators who see the necessity of such selection, and practice upon it. Some have practiced it with most valuable results, not in maintaining only the quality of seeds, but in originating valuable new varieties. There is indeed scarcely one of our ordinary crops which have not, within a few years, felt the effect of judicious selection.

But few cultivators, comparatively, recognize the value of a due preparation of seeds by steeping in fertilizing substances. There seems to be on record hardly enough of reliable testimony to justify a dependence upon any particular mode or any particular substance, in thus fertilizing our seeds, but quite enough to call for and to justify the most painstaking experiments to determine how or with what the different seeds may be prepared to give them that impulse in their earliest growth which seems to influence all their after progress. We know how especially necessary to our great staple, wheat, is such an early impulse, that, under our practice of late fall sowing, it may be so rooted in the fall as to enable it in spring to bear its burden of seed. It may be doubted whether the marvellous effect of a mere dusting of Peruvian guano were not due rather to this effect upon its earliest growth than

to any other influence. When the drill came into use, intelligent farmers testified that fifty pounds put in contact with the seed, through the tubes of the drill, were equivalent to two hundred sown broadcast: and less than half this quantity was said to give an equal apparent improvement, in some cases, where the grain was brined first and dusted with as much guano as would adhere to it.

Dr. David Stewart, well known as an agricultural chemist, and who has given a great deal of experimental investigation to questions of this sort, says, in an article published some years ago in the American Farmer: "Any soil properly constituted with regard to consistence, and in organic elements, will produce double the crop with good cultivation, if we insure a prompt and vigorous growth of the young plant."

"The most important influence," he says, further, "exerted by concentrated manures, appears to be their tendency to develop more promptly and perfectly the germs of the cereals. How it is possible that the embryo should anticipate its future wants, and recognize the supply, we cannot divine; but it appears pretty well established that seeds may be dormant for years, until a certain excess of the elements necessary to their full development accumulates around them, and thus, or by peculiar cultivation, they obtain the ascendancy over other plants.

"Multiplied experiments have proved that a tithe of this quantity, placed near the seed, will produce the same effect, although two-thirds of the manure are composed of volatile elements which do not contain one-fifth of their weight of nitrogen; and what is still more remarkable, the nitrogenous or ammoniacal manures, not only add more than ten times their weight of nitrogen to the plants, but those grains that contain the most nitrogen are least benefitted by nitrogenous manures. Have we derived no hints on this subject from the poor Indian, who to this day presses out a few drops of blood from his slaughtered foe upon his hills of maize? Blood is a highly azotised substance, exceedingly liable to change, and during the state of activity or change it is apt to set up fermentation in grains of corn, and those metamorphoses which precede and accompany germination."

A number of carefully made experiments are also found recorded in the American Farmer, as made by Hon. T. G. Clemson, Commissioner of Agriculture under President Buchanan, on his place near Washington.

"The practice of preparing seed," he remarks, "is by no means new. The Egyptians and other nations practiced the art, and I have reason for

believing that it made a necessary part of their system of husbandry. After multiplied observations and varied experiments, I have come to the conclusion that a proper preparation increases, vastly, production. I also believe that the same cause renders the plant less liable to the casualties of disease and the destructive action of insects, and in small grain, on which I have chiefly experimented, increases the quantity and quality of the grain, as well as adding greatly to the size, healthiness and amount of straw.

"These observations have been repeatedly corroborated by those who have had occasion and have taken sufficient interest in the matter, to compare and examine into the subject.

"As the experiments were instituted for my own personal satisfaction, I have not found it necessary to be exact as to measurement of ground and product, varied plantings, side by side, afforded the means of comparison for my purposes. At the instance of a friend, I carefully measured the ground planted last year in rye and wheat. No manure of any kind was used.

"The ground seeded amounted to nine and a-half acres—seven and a-half in rye and two in wheat. The top of the hill, which I thought the poorest, was sowed with rye, the seed having been previously prepared; through the entire length and in the centre a strip of about two lands was sowed with the same seed in its normal state. The ground sowed with prepared seed measured three acres. There was a manifest difference in the size of the heads, straw and grain, between the prepared and unprepared.—The crop from the prepared seed was even, tall and heavy; the heads long and bending over. That from the unprepared was uneven, much of it small and not worth cutting.

"The three acres from the prepared seed yielded thirty-six bushels. The six and a-half acres from unprepared seed yielded rye thirty-three, and wheat nine bushels—forty-two bushels."

There seems to be no reason at all to doubt the accuracy and care and intelligence which attended these experiments, or the remarkable results. What we should learn from them, and from all that has been said upon the subject, from the antiquity of the practice of preparing seed, and the confidence with which it is spoken of as an old usage, and by those whose attention has been more recently directed to it, is that it is a matter well worthy of scientific investigation, and the most careful and varied experiment.—And in our practice, in the meantime, no one for want of faith should fail to give his seeds of every description such fertilizing treatment as is here suggested. A soaking of twelve or eighteen

hours in the drainings of the manure heap, or soaking in strong brine and drying in powdered Peruvian guano, or some similar treatment, may be tried without loss, even if it fail entirely of anything but the labor. In these times of necessary economy, it will be very satisfactory to find that we can indeed cause great increase of crop at the very small cost indicated.

Resources of California.

Dr. Holden, President of the San Joaquin Valley Agricultural Society, in his late address before that body at the opening of their Fair at Stockton, thus sums up the resources of California. He is a practical agriculturist and representative man of the bone and sinew of the land:

"The State extends from latitude 32 deg. 20 min north, to latitude 42 deg. north, is 570 miles long, and has an average width of 230. It embraces 89,685,515 acres adapted to agricultural purposes, 23,000,000 acres swamp or tule land, thousands of acres of which are being reclaimed, and much of it producing unparalleled crops of vegetables, grass and fruits. The area of the valley is 30,000,000 acres, making, with the mountain land, a total of 70,000,000 acres suitable for agricultural and grazing purposes. Of this there is under fence over 6,000,000 acres, of which 178,960 acres, in 1860, produced 3,068,693 bushels of wheat; 154,690 acres produced 6,939,678 bushels of barley; 37,620 acres produced 1,563,459 bushels of oats. This year, as near as can be ascertained up to this date, four times the above amount of cereals have been raised.

Fruit trees and grape vines, in 1860, numbered 6,000,000. These have quadrupled up to this time. Stock of all kinds in 1860 numbered 1,576,990. Horses 577,000, cattle 922,374, sheep 491,794, goats 12,743, swine 165,921, mules 47,000, poultry over 80,000. At the present time there are over 2,000,000 sheep, and in no part of the world do they do better or can be raised at less cost. The French and Spanish merinos, the Southdown, the Cotswold and other varieties have been imported from the Atlantic States, France, Spain and Australia, and prosper here as well as in their native countries. Wool is fast becoming an important article of export, over 7,000,000 pounds having been shipped last year."

Certainly agriculture and manufactures should be made the leading interest of the State; the mines may run out, the soil never can.

Scientific Farming.

It is not our purpose, in these papers, to attempt to explain the mysteries of planting, or to advocate any particular theory of vegetable growth. We propose merely to state the facts that fall within the range of common observation, and to trace the connection of these with their obvious causes.

The subject of ammonia, and its influence on the growth of plants, which we introduced in the last number, is, when properly understood, a key to unlock many mysteries that surround the observing farmer. Remembering that ammonia furnishes plants with all the nitrogen they contain, and that animal—every tissue of whose bodies (excepting the fat) contains nitrogen—derive it all, through the vegetable, from ammonia, and that these organized structures, both animal and vegetable, when they decay, return their nitrogen to the air, in combination with hydrogen, in the form of ammonia; and when we furthermore bear in mind the very light and volatile character of this gas, and its high solubility in cold water, and the readiness with which it is liberated again when the water is warmed but a little, we shall be able to solve many problems which have often presented themselves to the observing farmer. You have all observed how much more vigorously plants grow after a shower of rain, than after artificial watering, however well it may have been done. This is especially observable if the shower has been preceded by a drought of some weeks. You need have no difficulty in explaining this. From the decay of organic bodies the ammonia has accumulated in the air—the water, descending through the atmosphere, washes out the ammonia and carries it to the roots of the thirsty plants, which drink it up greedily, supplying at once two of the important elements of plant growth—water and ammonia; while in artificial watering we supply only one of these. If, however, the soil is deficient in vegetable matter, the lack of carbon will soon be seen in the rapid loss of ammonia when the surface is exposed to a warm sunshine. Or if but a few inches of the surface soil has been pulverized, the heat of a summer's day will certainly drive back into the air all the ammonia that yesterday's shower brought down to the earth. Deep cultivation holds the ammonia at a depth below the heating influence of the sun's rays. This is by no means the least important advantage of deep tillage and thorough pulverization of the soil; nor is it only the ammonia and carbonic acid brought down by the showers that a soil properly tilled will appropriate. A porous, finely pulverized soil admits the air to circulate freely through

it, and the fertilizing gases mixed with it are absorbed by the soil and retained for plant food.

Another fact, which every observing farmer has noticed, may be noted in this connection. The good effect of a shower depends much on the time of its falling, and the subsequent condition of the air. If a shower falls early in the morning, and is immediately succeeded by a hot sunshine, farmers say that the crop gets but little good from it. But if the shower comes in the evening, then plants will be greatly benefitted by it. Now the reason of this is obvious. The ammonia brought down by the morning shower has hardly time to reach the roots of plants, before the heat of the sun sends it back again into the air; but the evening shower carries its fertilizing gases to the roots of plants, and they quietly feast on it all night long, and the remainder of the plant food thus furnished has, by the time the sun warms the earth on the following day, been carried downward, in the well pulverized soil, so far that it is but little effected by the sun's heat.

The careful farmer who understands the science of his business, will not only prepare the soil so as to give it the highest capacity for absorbing ammonia and carbonic acid from the air, but he will furnish these indispensable articles of plant food for the use of his growing crops, from every available source. A very effectual method of doing this is the plowing in of green crops. Growing vegetables contain a larger proportion of the nitrogenized elements, than is found in them after they have fully matured and ripened. These, when plowed under in the green state, are rapidly converted into carbonic acid, water and ammonia, and these being disengaged under the earth, are absorbed by the soil, and held subject to the demands of the subsequent crop.—The farmer, whose stubble field, last fall, was covered with a heavy crop of ragweed, which he suffered to ripen and stand exposed to the storms of the winter and spring, has but a faint idea of how much his corn crop of this summer will lose by his neglecting to turn his ragweed under while it was in bloom.

Clover is the crop commonly used for turning under, and, if plowed in when in the vigor of its growth, is probably the best; but almost any thick coat of growing vegetation will serve a good purpose, if deeply turned under. There is an inconvenience, or perhaps two of them, attending the use of clover as a green dressing for fallows. If we turn under the first crop, it will require to be done about the middle of June—a time when the corn crop demands all the force usually available on the farm. If the second

crop be used, it furnishes less green material than the first, and is drier, harder, and decomposes more slowly, and furnishes proportionably less ammonia to the soil.

If the farmer, however, manages to spare the labor from the corn field to plow in the June crop of clover, his naked field must be exposed to the direct rays of the sun, without any protection during the long, hot months of summer. The damage from this exposure will nearly offset the advantages of the green dressing.

From this cause, a fall crop, if it be but weeds, should always be preferred for plowing in, whether the ground is to be sowed in wheat or planted in corn the next spring.

In plowing in green crops, care should be taken to have the vegetable matter well covered. Indeed the crop should be turned under so deep that if the corn be raised on it the following year, the vegetable matter will not be disturbed by the cultivator.—*R. T. Brown in Northwestern Farmer.*

Vineyard Management.

The *Missouri Democrat* contains a report of the late annual meeting of the Missouri Horticultural Society. A large portion of the discussions was occupied with the grape and its culture, and among the letters read we extract the following from that of J. M. Jordan, of St. Louis, who planted a vineyard of five hundred Concord vines, in the spring of 1864. He remarks :

"In the spring of 1866 I put up a trellis of oak stakes, $8\frac{1}{2}$ feet long, $1\frac{1}{2}$ feet in the ground; slanted the top to the north 3 feet; put in one stake to every two vines; put four lines of wire on the top side, lower line 2 feet from the bottom, the other 20 inches apart; fastened the wire to the stakes with a No. 8 wrought nail, driven into the stake and bent over the wire. From these 500 Concords I cut 11,000 pounds—an average of 22 pounds to the vine. This season, from one vine, I cut 96 bunches; they weighed 23 pounds; from another 65 bunches, weighing $30\frac{1}{2}$ pounds. I pinch the fruit bearing laterals as soon as I can after the third bunch of fruit has shown itself.

My present opinion, subject to correction, by farther experience, is success with the Concord depends on good healthy vines, planted about 8 inches, in well plowed ground. Plow at least 12 inches, and the deeper the better. Clean culture, never growing any other crop in the vineyard, not so much as a crop of weeds. Always grow enough good, well ripened wood for the next year's fruiting, and no more. Leave the laterals to grow on the new canes, about 1 foot

long, and then pinch them, and on the fruit-bearing vine pinch the lateral as soon as the third bunch of fruit has set and a leaf opened; then rub off the first bunch of fruit, and leave the second and third to mature; this work, I think, is the *most* important, (with the exception of gathering the fruit when it is ripe, and killing the birds that rob the vines) of any the vintner has to do, for a *very few days* neglect will often blast a large proportion of his crop.

Prune with thumb and finger; never use a knife in summer pruning. We should *direct* the growth, not cut it away."—*Country Gent.*

Management of Grapevines.

I would here remind those who are growing grapes, that this is the proper season to lay down long branches for producing future plants, as has been so often recommended in this paper. I raised a number of these last season, and was surprised at the vigor of the plants thus grown, and the close mat of fibrous roots. Without any desire to spoil trade, I must say that you seldom get such plants out of a nursery as you can raise yourself. Pin a long branch down into a shallow trench, and when all the buds have made a growth of several inches, gradually fill the trench up with earth, checking, by pinching, any disposition of some shoots to outgrow the others.

I agree with B. F. J., in thinking that we imitate European practice too closely in cultivating the grape. Especially do we plant too near, and thin and prune altogether too much. We don't make allowance enough for the difference in climate. Here we must have shade and a plenty of foliage to maintain a healthy equilibrium with the root; there it may not be of so much importance. I always leave three times as much wood as the books direct, and if the crop of fruit is too heavy, thin it out. Twenty years ago we could easily grow grapes by planting at the foot of large trees, and allowing the vines to run all over them. A friend grew great quantities of Catawbas and Isabellas in this way, and yearly got at least two barrels to the vine of what I then thought was the finest and choicest fruit I ever saw. These vines are long since dead, winter-killed. Now we are obliged to cover our plants every winter with earth, even as far south as St. Louis, and are lucky if we get seven or eight pounds of fruit where we once got fully one hundred pounds with much greater ease. Even with these drawbacks, growing the grape is the most profitable branch of agriculture that we have, and for more than a hundred miles on the Mississippi river banks, it is the most certain crop that is raised.—B. T., *Country Gent.*

Courage and Confidence—J. W. Manning's Nursery.

In every department of life, and in every industrial pursuit, there are always plenty of Little Faiths, while the Great Hearts are about as seldom met with as they are in Pilgrim's Progress. Among fruit growers the tenants of Doubting Castle have been greatly increased of late, by such Lions in the Way, as canker worms, curculios, borers and certain indefinable and mysterious, but potent adverse "atmospheric influences." Against the ravages of wild beasts and insects—against anything, in fact, that can be seen or felt, anything that has flesh and blood—men had courage to contend long and bravely; but now that the "Prince of the powers of the air" is pitted against the cultivators of fruit; now that blight has chartered the thunder cloud that passes over the tree in blossom; now that sunshine and the soil are channels of disease and death, brave indeed must he be whose faith is unshaken and whose heart quails not. And yet there are such men,—men who, in the face of all these discouragements, believe that fruit may be still raised in New England! We catch a glimpse of such an individual in another article in this week's *FARMER*. We allude to J. A. Harwood, Esq., of Littleton, on whose farm there are large apple and peach orchards, and who thinks there are as good inducements now as ever for engaging in the cultivation of fruit. In our paper of the week before, Mr. Comings, of New Hampshire, expresses the opinion that the care of trees will pay if the care of lambs and pigs will; and Elder Frederick, a New York Shaker, tells brother Hepworth, "thee sees we love our garden," and intimates that his trees both know and love him. A week or two ago, the *Boston Cultivator* told us of Capt. Geo. Pierce, of Arlington, (late West Cambridge,) who, in the midst of legions of canker worms, and all the other ills that trees are heir to in the older portions of the country, sold last year \$1198.07 worth of apples, and \$532.25 worth of pears and squashes, from three acres of what was once called "Poverty Point."

If these are brave men, is not he a braver man still who goes into the nursery business in these times? This question brings us back to the place of beginning—Mr. J. W. Manning's nursery, Reading, Mass., which we recently visited.

Mr. Manning is a practical nurseryman. He was an apprentice and student to the late S. W. Cole, author of the *Fruit Book*, and first editor of the monthly *NEW ENGLAND FARMER*. In this connection we may remark that we had the pleasure of meeting here one of his sons, spade

in hand, who is about to revive the Winnisimmet nursery in Chelsea, which was established by his father.

Mr. Manning has built up, in within the last twelve years, quite an extensive business at Reading. We are particularly pleased with a late addition to his grounds of some ten or twelve acres, consisting of almost every variety of soil, from a deep muck to a light sand, on which he was at work at the time of our visit. This had the fresh appearance of "new land;" most of it having been recently cleared of trees, bushes, rocks, and water, at a large expenditure for chopping, blasting, ditching, plowing, subsoiling and trenching. Here and on other portions of the grounds, the display of the trim bodies and graceful branches of some four thousand maples, from six to sixteen feet high, the "spruce" appearance of some two hundred thousand evergreens, with elms, apples, pears, and other fruit trees in corresponding profusion, arranged with all the military precision of a dress parade, with uncounted grape vines, currant bushes, &c., richly repaid us for the pleasant spring morning spent in this nursery. The standard apple, pear, cherry, and even peach trees, appeared to be remarkable thrifty and healthy, the cherry and peach being in full blossom. Mr. Manning has no faith in the theory of the degeneracy of fruit trees, in the omnipotence of insects, nor in any permanent unfavorable change in the seasons, but believes that those who plant trees and take proper care of them, will have no occasion to complain of want of success.—*New England Farmer.*

Roanoke Tobacco Company.

Above Danville, in Virginia, toward the headwaters of the Dan river, are the celebrated grey lands, which produce the famous high flavored tobacco, now monopolized and manufactured by this company; a small lot of this tobacco, of two qualities, the "Maryland Club" and the "Prince of Wales," were forwarded to this office some time since, by Col. George P. Kane, the Superintendent of the Company. We have smoked the Turkish tobacco, even the famed Latakia, sent by the Sublime Porte as a unique and complimentary present to all foreign diplomatic agents within the Turkish Empire. The "Lone Jack" and "Here's Your Mule," have cheered us on many a lonely bivouac, but we must say that the tobacco from the grey lands of the upper Dan, manufactured by the Danville Company, is the best we have ever smoked. Dealers wishing supplies of this tobacco can apply to the selling and purchasing agency of Bruce, Millard & Skinner, 37 Park Row.

Dairy Galloways.

There was a promise passed I know, to impart to the public through the medium of the "*Journal*," at an early day, something which some one happened to know of the qualities and characteristics of the pretty little provincial cows of Britany. But just at this time I have no means of determining whether that promise was made by Yours Respectfully, in person, or some one of three or four personal friends. *N, importe*—I hold myself responsible for the fulfilment of the obligation, and would cancel it now, but for the interposition between my pen, the publisher and the public beyond, of a bovine of another character so well worthy of favorable public opinion that for this time Britany must go to the wall, while the North Britian walks up for presentation to our American stock breeders, dairymen and farmers generally.

An eminent English herdsman, whose authority is unquestionable, thus writes of the Scottish Galloways: "Small, harmless, hornless, docile and hardy animals—color dark brown or black, flesh of fine grain and quality—milk moderate in quantity, but excessively rich—almost cream—as it flows from the udder, the milking period being considerable longer than with any of our favorite Southern breeds. Inability to endure severe winter weather unsheltered, the Galloways have no equals, and in capacity for maintaining a supply of milk and themselves in good heart condition, they are excelled only by the Irish Kerries."

Though my own practical experience with the Galloways has not been a tithe of that of the gentlemen quoted, I have seen a great many of them—milked with my own hands more than a hundred different cows of the breed, never in a single instance, so far as I can now remember, meeting with one who moved head or heels with vicious intent during the process of milking, so that my own conclusions in that direction are that I was either singularly fortunate in the selection of animals to experiment upon, or else the Galloways are the most docile, well behaved milkers that milk man or maid ever put a pail under.

In Canada, and throughout the British possessions in North America, the number of Scottish Galloways kept for dairy and ordinary milking purposes, probably exceeds at the present time that of all other breeds counted together, and having made diligent and close inquiries respecting them, from many parties best qualified to afford correct information—during a recent extended excursion through Canada and the provinces east, I make up from all the testimony

taken, my own observations included, the following points which I believe to be facts.

The Galloway cow, though affording a smaller quality of milk per day when fresh, than any of the English or American dairy breeds or grades, by maintaining a maximum flow throughout the season, and milking from three to five weeks longer than the average with other breeds, the amount of milk in the aggregate will equal that of any of the ordinary breeds of cows. The amount of butter per cow per week, calculating all together from the dairy herd of thirty or more animals, down to single cows kept by gardeners, mechanics, &c., and counting eight months as the season, the average will be very nearly eight pounds. Though in many instances Galloways kept on "short commons," or rather keeping themselves as best they can on commons, or "browsing" out their board abroad in woods and swamps, will average nine pounds of best quality butter per week through the entire season. Have we many cows among us of any breed or grade that under like conditions will do as well?

About two-thirds the bulk of feed required to keep a cow of any of our ordinary dairy breeds in medium milking condition during the feeding portion of the year in the Middle and Northern States, will carry a Galloway through a cold Canadian winter a month longer than ours, maintaining a maximum flow of milk, and the animal in first class condition. It is the popular opinion, both in Scotland and British America, that provided with a well littered yard, and ordinary open shed, fronting the south, the Galloway cow will do better than she will cribbed, confined and cooped up in a close stable. I have seen them cropping out a comfortable subsistence from resources where the most enterprising Alderney, Devon, Hereford or Short Horn that ever went afield would perish with famine. And many a time have I seen the black, Scottish "buffaloes" wading and wallowing through Canadian drifts, braving Arctic blasts and blinding snow storms, with the mercury down to nothing, seemingly as insensible to cold as a Russian sable.

The Galloway cattle are less liable to any of the ordinary diseases incident to bovine existence than any other breed of stock, if we except the wild cattle of the South American plains and pampas, and being excellent breeders, kind in disposition, amiable in habits, cheaply maintained and so easily obtained from our Canadian neighbors, it seems to me that an early experiment with the Scotch Galloways would be well worth the attention of our breeders, farmers and dairymen.—*VICTOR in the Am. Stock Journal.*

A Fruit Critic Criticised.

The farmer of Edgewood, in a recent number of the American Journal of Horticulture, advances some very sceptical and heterodox notions in pomology, calculated to discourage improvement in this fine art. He says: "I doubt very much if the finest flavored fruits can be grown as easily as the grosser tasting ones." And again, "in the pear line, it is quite possible that, with great nicety of treatment, both in garden culture and in the ripening process, (which last counts for a great deal,) a higher and finer flavor may be given to the Beurre Diel, or the Flemish Beauty, or the Beurre d'Anjou, or even the Duchess, than belongs ordinarily to the Bartlett. But put the Bartlett in comparison with either, under fair average treatment, and upon ordinary garden lands, and I think two luscious Bartletts will present themselves, to one of either the other names." The idea here advanced, that the finer kinds of pears require specially nice treatment in order to succeed, is mischievous, and is certainly not sustained by facts. The Seckel, the highest flavored of all pears, is even more hardy than the Bartlett, and will bear good fruit in almost any soil that is adapted to the pear. It is improved in size by high cultivation, but that is true of all pears—and of the Bartlett as well. We do not think the flavor of the Seckel is improved by its size. The Flemish Beauty and the Beurre Biel, upon ordinary garden lands, and with the fair average treatment, have always borne as well as the Bartlett, in our experience. The Beurre d'Anjou is a newer pear, but it is notoriously a good grower and bearer, and may prove itself adapted to as wide a range of soil and climate as the Bartlett. The Duchess is more fastidious about its soil, but where it finds congenial aliment, it is as easily raised, ripens as well, and keeps better than the Bartlett. We found four large, well grown trees, upon pear stock standing in a common meadow, three years ago, in Westchester county. They have never had any special care, apparently; they stand in sward land, and yet for three years in succession, they have borne abundant crops. A cow-pasture seedling could not be more hardy, or bear with more uniformity. This variety, we are told, does very well at New Haven, and is comparatively worthless at Hartford. This depends, we suppose, not at all upon treatment or culture, but upon the original character of the soil. The Paradise d'Automne, the Muskingum, the St. Ghislain, pears of exquisite flavor, are quite as successful with us as the Bartlett. In soil that suits them, without any special manipulation or culture, we think they

can be grown with as much uniformity and in as large quantity. This, we think, is true of many other pears of the first quality. Farmers, and beginners in fruit culture, should not be discouraged from trying to grow the best varieties, by the idea that they require specially nice treatment. They will do better with this than without it, as the Bartlett will, but they are quite as likely to succeed with ordinary care.—The best are quite as likely to succeed in your soil and climate as inferior varieties. Therefore, plant them. A great deal of horticultural writing is an account of local experience, valuable as far as it goes, but it should be distinctly stated that they are only individual opinions. No one man is able to lay down rules for the whole extent of this vast country.—*American Agriculturist.*

How to Keep Up Your Hay Crop.

A farmer who had been in the habit of selling his hay for many years in succession, being asked how he kept up his hay crop without manuring or cultivating his land, replied, "I never allowed the after swath to be cut." If this rule was generally followed, there would be less said about running out of grass fields or short crops of hay. Some farmers feed off every green thing and compel their cattle to pull up and know off the roots of the grass. Cutting rowen is cutting ruin, and hard fall and winter grazing is certain death to hay crops. A farmer had better buy hay at \$40 per ton than ruin his hay field by close grazing. The general treatment of grass lands in this respect is wrong and expensive, and should be abandoned as a matter of profit and economy.—*Wisconsin Farmer.*

Gas Lime as a Fertilizer.

An officer of the Edinburgh Gas Company, writing to the *Scottish Farmer* concerning gas lime as a fertilizer, says:

"I believe that waste gas lime is equal in efficiency to fresh lime for most of the purposes aimed at in its use in farm lands. I sold all the lime thus produced at the gas works in Forfarshire, for sixteen years, to several farmers, who uniformly expressed their satisfaction therewith. One very useful application of it was its mixture with the large pile of weeds and tangled roots of grass cleared off the fields annually. On being composted in this way, the lime gradually killed all the vitality of these weeds, and returned them to the land in the way of manure. It also served the purpose of opening up stiff clay soils, being first spread over the surface, and then ploughed down."

Wool Growing in Texas—Scab in Sheep.

Eds. Co. Gent.—Sheep farming was fast becoming the most important interest in this State, when, just before the war, a lot of Merino bucks brought from the North, disseminated that terrible pest, scab, far and wide. It has spread in our clear climate in a wonderful manner, as it did in Australia, well nigh there putting an end to the business of sheep-breeding.

At this moment, notwithstanding the temporarily improved prospect of the wool grower from the recently levied duties on that staple, the business is in so depressed a condition that good flocks can be purchased to almost any extent, at \$1 to \$1.50 per head in coin, and this almost entirely from the prevalence of scab.

I made it my business in Europe, to learn what means were used there to cure this disease and keep the flocks clear of it; to destroy lice, cads, ticks, &c., and to cure foot-rot, and found that a somewhat recent discovery of the wonderfully destructive effects of carbolic, cresillic or phenic acid, (one of the products of coal-tar,) upon insect life, led to its employment upon sheep, to rid them of the various pests to which that patient animal is so liable. *McDougall's Sheep Dip* is almost the sole remedy used. (See mention of its effects, page 246 of *Dell's Annual Scientific Discovery* for 1862.)

In my boyish days sheep were smeared with a mixture of pine tar and palm oil, or coarse butter. But that being found objectionable, from several causes, various dips, powders, pouring oils, &c., were used. All contained poisons of some sort or other, injurious to man and beast; or, as in the case of tobacco water, powders, &c., were ephemeral in their effects; and although I found some still using compounds of tobacco, sulphur, hellebore, mercury, arsenic, &c., &c., it is to a very limited extent, while the *McDougall Dip*, is used to a vast extent. The "Glycerine dip," and "Girdwood's Melossoon dip," are mere infringements upon McDougall's.

On arriving in New York, I learned that Professor Seely and Dr. Eames had discovered the same effects of carbolic acid, and had patented certain compounds to be used for the destruction of insect life some years ago. They are now manufacturing sheep dip, soaps, disinfecting powders, foot-rot ointment, &c.

It is of exceeding interest to us, in Texas, to know what is done, and the results, in this way in the north and west. Will your correspondents instruct us?

The great advantages claimed in England, Australia and New Zealand, from the use of car-

bolic dips, are that it not only destroys all insect life in the animal dipped, but that none will again attack the same animal for months. That its effects upon the skin of the sheep are healing and cleansing, and equally good upon the wool. For the foot ointment equal efficiency is claimed.

For the carbolic or cresillic soaps, they assume that fleas, bedbugs, cockroaches, &c., will not remain upon floors, beds, &c., washed with it. I know that its use is required in hospitals, jails, ships, &c.

The crude acid, such as is evidently used in the manufacture of sheep dip, deck soap, &c., smells strongly of coal tar. But some which I saw used by laundry-women had but a faint smell, which I was assured disappeared when the clothes were dried. Hand soap had no offensive smell. It is said that mosquitoes will not touch the face and hands washed with it. Glorious, if true!

I hope that some of your correspondents have tried the carbolic dip by this time, and can tell us of its effects. I only wait its appearance in market to give it a thorough trial.—*Thomas Affleck in Co. Gent.*

"*Glenblythe,*" near *Brenham, May 16, 1867.*

[We had the pleasure of making the acquaintance of Mr. Affleck as he passed through Baltimore on his return from Europe. He was well known to us before, by reputation, as one of the most intelligent agriculturists in the South. Ed.]

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RENOVATING WORN OUT LAND.—At a recent agricultural meeting in Boston one of the speakers remarked that "on a tract of land which was overrun with woodbox, briars, and other shrubs, he turned one hundred and fifty sheep. At that time a cow could not have lived on the whole tract. The sheep were kept there several years, and so killed out the wild growth that the tract now affords good pasture for fifteen cows."

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It is estimated that there are thirty-two and one-half millions of sheep in the loyal twenty States and two territories. It is supposed that the annual number of lambs will be over twenty-four millions.—*Country Gentleman.*

Not definite enough. Which are the twenty "loyal" States.—*Ed. Farmer.*

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A correspondent of the *Prairie Farmer* at the Paris Exposition says: "The competition in ploughing has thus far been between France and England, resulting very greatly in favor of the English manufacturers."

The American Farmer.

Baltimore, July 1, 1867.

TERMS OF THE AMERICAN FARMER.

SUBSCRIPTION TWO DOLLARS PER ANNUM.

RATES OF ADVERTISING:

Eight lines of small type constitute a square.

	1 Mo.	3 Mo.	6 Mo.	1 Year.
One Square.....	\$2.00	\$5.00	\$10.00	\$15.00
Half Column.....	8.50	20.00	35.00	60.00
Half Page.....	15.00	35.00	60.00	110.00
One Page.....	25.00	60.00	110.00	200.00

PUBLISHED BY
WORTHINGTON & LEWIS.
Office, 52 S. Gay street,
Near Exchange Place.
BALTIMORE.

The delay in the issue of *The Farmer* this month is owing to the break down of the paper mill on which we depend; one of those unlucky accidents that human affairs are subject to.

POULTRY ADVERTISEMENTS.—There is a large demand, we think, among our subscribers, for choice poultry. Those who have a taste for the best of every sort of stock, but whose means forbid large expenditure, will yet find themselves able very often to indulge in the comparatively small cost of poultry of the best breeds. A subscriber, now writing from Cheraw, South Carolina, asks for lists from poultry breeders "of their different breeds and prices per pair, delivered at the Adams Express Office in Baltimore."

Poultry breeders will find room in our columns for their advertisements.

TRIAL OF THE STAR DRILL.—This implement, in accordance with a notice given in our last, made a special trial of its working capacity on the sixth of June at the Agricultural College. For the reason that there was no ground available, on which its peculiarities could be fairly tested, the trial was not a satisfactory one. There was only corn land of last year, foul with briars and not cleared well of the stalks. Those who saw it operate, were quite satisfied that on land well prepared in advance, the Drill will accomplish all that is claimed for it as a grain drill and corn planter, with the advantages of ploughing under the seed, at a perfectly uniform depth, and following with the roller at the same operation.

Will all who write us on any subject, but especially in reference to *subscriptions*, please state the *Post-office*, (the old one as well as the new, if a change has been made since last writing.) We have several communications that must remain unattended to until we know the Post-office address of the parties.

•••
Subscriptions.

A few days after the issue of our June No. we were visited by a subscriber from a distant county of Maryland, who came to Baltimore for the especial purpose, for aught we know to the contrary, of paying his bill to the *Farmer*. We have rarely seen a case of more wholesome fear of consequences. "To die and give no sign," to be "dropped off" without a word, was a melancholy end of him that he could not stand.

Exacting a promise from us not to stop the *Farmer* without due notice, he paid his bill and went on his way rejoicing, with thirty cents in his pocket to cover dinner and railroad charges. A somewhat curious inquiry discovered to us that the state of our friend's finances was due, perhaps, to the fact that his spare corn had gone South for starving women and children.

We beg our friends everywhere to bear in mind that subscriptions are now due for the new volume, of which this is the first number. The printers and the paper makers are inexorable, and must have their bills paid. Surely those who are abundantly able to pay promptly \$2 for what we furnish, need not be urged to so small a sacrifice, when it puts it in our power to oblige many who are not able to pay.

The following letter, which is a sample of very many that we get, indicates the necessity of punctuality among those who have abundant means to pay:

BARHAMSVILLE, VA., June 11, 1867.

Messrs. Worthington & Lewis:

GENTLEMEN—Enclosed please find \$2, being the amount due for your invaluable paper for the past year, which you have kindly sent me; and just here I would offer you an apology for not having long since remitted you the money, if I were not aware of the fact that your wide spread knowledge of our devastated country and ruined fortunes supersedes the necessity for making any excuse. I was a regular subscriber to the *American Farmer* ten or twelve years prior to the war, and never tired of its rich store of valuable information, characterized no less for its invaluable agricultural instructions than for the manly and noble christian virtues which it inculcates, diffusing much light on many subjects of material

interest, and affording, at the same time, great pleasure to all who are favored with the privilege of perusing its pages.

You will please accept my best wishes for a more extensive circulation of your paper, and believe me to be

Very respect'ly your ob't serv't, J. S. L.

P. S. Should you think fit to continue sending me a copy, I will, if life lasts and nothing prevents, remit you the amount of subscription after awhile.* Truly, &c., J. S. L.

*In every such case we will take pleasure in continuing the *Farmer*. W. & L.

AMHERST COURT HOUSE, VA.

June 19th, 1867.

Editors American Farmer:

DEAR SIRS: You will, I trust, pardon my delay in forwarding my subscription for the "*Farmer*," which I have read with so much profit; I hope, however, I am "bringing up the rear guard," and that when you issue the July number all of your subscribers for the past year will have liquidated their indebtedness. Your kindness in forwarding the "*Farmer*" to your old subscribers, after so many years of fierce and cruel war has swept over and devastated our beloved country, makes an irresistible appeal to all who have received it to aid you in your noble enterprise. I hope your subscription list may increase an hundred fold. Any one having *only a garden to cultivate* cannot invest \$2.00 better than by subscribing for your old and valued journal. The information given under the head of "*Work for the Month*" is more than worth the subscription.

With many kind wishes for your future success, I am truly yours,

G. A. R. T.

Kinds of Grass and Quantity of Seeds per acre.
—A. E. W., Wilmington, N. C., will find his inquiries as to quantity of seeds per acre, answered on another page.

[The best and only grass seeds that it is worth while to sow on "wet lands" is "Red Top," called here commonly Herds' Grass. Timothy and Orchard grass are the best for hay on dry land. All may be sown at the time of wheat seeding in the fall, but in this latitude Orchard grass is usually sown in spring, with clover seed. Clover is especially valuable for pasture and land improvement.

Orchard grass and clover *may* be cut twice on very rich land, but it is better to give the land the benefit of the after growth, moderately grazed.]

The Agricultural College.

We take pleasure in being able to say, that at a meeting of the Board of Trustees of the College, held on the 6th of June, it appeared from the report of the Registrar, that every dollar of the indebtedness of the Institution was provided for, and, notwithstanding that a corps of Professors larger and better paid than ever before was engaged, the Board found itself able to begin at once a plan of improvement at the College consistent with the designs of the Institution, and capable, when completed, of answering all its useful purposes. These improvements are already begun, and consist first, of all necessary repairs of the College Building, with such changes as experience has suggested, especially for thoroughly warming it; and all necessary refurnishing and refitting.

The Farm improvements, the necessary buildings, the addition of suitable stock, and a system of cultivation, land improvement, planting, &c., are already in operation to an extent that will mark the present season as the beginning of a new career. We do not mean to say that every thing is to be done at once that may be desired, for that, present means do not allow; but that a judicious plan of operations is to be executed with energy, and to the full extent of the financial ability of the Board. Such a plan well begun now, will answer present purposes, and its prosecution, through several years to come, will be matter of interest and instruction to agricultural students.

It should be understood, as the published circular indicates, that this Institution is to be what its name implies, a Maryland *College*. Its standard of instruction is to be not below that of other colleges in or out of Maryland. A Preparatory School is not embraced in its scheme, and no student admitted under fourteen years of ago, unless fully prepared for the Freshman Class. If it may be deemed expedient in the beginning to allow the College Faculty to prepare for the Freshman Class such as are not fully up to its requirements, these cases would be exceptional.

There are two distinct Courses of Instruction. *The Academic Course*, which is that of other colleges, embracing the Ancient Classics, Modern Languages, Mathematics, &c. And, *The Agricultural Course*, which embraces "thorough instruction in the Schools of English, Mathematics, Agriculture, with the Sciences applicable to it, and one or more modern languages." These courses will run parallel, and as far as practicable be combined, but any student make take either.

The President elect, Charles L. C. Minor, Esq., of Hanover Co., Va., visited the College in the past month, and co-operated with the Resident Faculty in the preparation of the Course of Study, and on the invitation of the President of the Board of Trustees, attended its meeting on the 6th of June. He will enter upon the duties of his responsible position in September, having the fullest confidence of the Board and his associates of the Faculty, and their heartiest support.

We shall scrupulously abstain from one word that may look like puffing the College into favour, but we will bespeak for it, from the community, a generous confidence, which we believe its future will justify. We ask especially that Marylanders will give it the support due to a peculiarly Maryland Institution, and help those engaged in the good work, to build up a seat of sound learning within her borders, which, as such, will do honor to the State, while it shall foster and elevate the pursuit which was first in the thoughts of its founders. We are not working for the present, only, but for a long future; not for ourselves and our sons only, but for their sons, and the generations to come of Marylanders.

Utility of Moles.

An interesting experiment, which shows the service rendered to agriculturists by moles, and the impolicy of destroying these little quadrupeds, has been made. In a commune of the canton of Zurich, the municipal council were lately about to proceed to the selection of a molecatcher, when M. Weber, a distinguished naturalist, laid before the board the following facts:

M. Weber had carefully examined the stomachs of fifteen moles, caught in different localities, but failed to discover therein the slightest vestige of plants or roots; whereas they were filled by the remains of ascaris or earth-worms.

M. Weber, not satisfied by this fact, shut up several moles in a box containing soda of earth, on which fresh grass was growing, and a smaller case of grub and earth-worms. In nine days two moles devoured three hundred and forty-one white worms, one hundred and ninety three earth-worms, twenty-five caterpillars, and a mouse, skin and bones, which had been enclosed while alive in the box.

M. Weber next gave them raw meat, cut up in small pieces, mixed with vegetables; the moles eat the meats and left the plants. He next gave them nothing but vegetables; in twenty-four hours two moles died of starvation.

Another naturalist calculated that two moles destroy twenty thousand white worms in a single year. Evidently farmers ought to endeavor to multiply moles rather than kill them.

Ville's Chemical Manures.

M. Ville, who has been largely encouraged in his researches in vegetation by the Emperor of France, has classified manures under four general heads. He represents these by 1, nitrate of soda or sulphate of ammonia; 2, quicklime; 3, superphosphate of lime; and 4, carbonate of potash. When he has an untried soil before him, he divides it into four parts, to each of which he adds one of these substances. The result of the crop shows him wherein his soil is deficient, and how to rectify that deficiency. His complete, universal manure is a mixture of these substances.

Recently some experiments have been tried on this principle, and the results are quite striking. M. A. Cavalier divided a hectare (2.471 acres) into six parts, and manured them as follows:

	I	II	III	IV	V	VI
Of Sulphate of Ammonia	11 1/2	11 1/2	11 1/2	0	11 1/2	0 lbs.
Of Phosphate of Lime	5 1/2	5 1/2	5 1/2	5 1/2	0	0 lbs.
Of Commercial Potash	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	0 lbs.
Of Quicklime	5 1/2	0	5 1/2	5 1/2	5 1/2	0 lbs.

The crop cultivated was beet root, and the quantities obtained were calculated to the hectare.

	TONS.
From part I. Complete manure.....	.51
From part II. " less Lime.....	47.445
From part III. " " less Potash.....	.25 .34
From part IV. " " less Ammonia.....	.36 .824
From part V. " " less Phos. Lime.....	.37 .881
From part VI. Without any manure.....	.25 .550

Thus the complete manure gives an increase of $2\frac{1}{2}$ tons of beets, doubling the crop. The cost of the manure is 395 francs per hectare, so that the profit is 115 francs.

On repeating the experiment on two plots of $2\frac{1}{2}$ acres each, he gave to the

FIRST.	SECOND.
Sulphate of Ammonia.....	1360
Phosphate of Lime.....	2000
Carbonate of Potash.....	500
Lime.....	500

And the product was, of beet roots, perfectly cleaned and leaves and fibres cleaned off, from the plot

First plot.....	59.640 tons.
Second plot.....	45.325 tons.

M. Leroy, at Varcenne, (Oise,) got the following results :

	Tons per hectare.
Complete manure.....	.62 .37
" " without phosphate.....	.48 .33
" " " potash.....	.42 .39
" " " ammonia.....	.28 .35
With Phosphate of Lime alone.....	.18 .90
With lime alone.....	.945

During the last two months, R. L. Maitland, of New York, has sold two Alderney cows at \$500 each; five at \$300; one at \$250; and three at \$200 each.

Book Table.

THE SMALL FRUIT CULTURIST, by Andrew S. Fuller. *Practical Horticulturist*, Bridgewood, N. J., beautifully illustrated. Published by Orange Judd & Co., New York. This little work will give valuable assistance to the multitude now engaging in small fruit culture. The author is an intelligent cultivator of much experience, and his book may be relied on as a guide. He treats of the *Barberry*, *Strawberry*, *Raspberry*, *Blackberry*, *Dwarf Cherry*, *Currant*, *Gooseberry*, *Cornelian Cherry*, *Cranberry*, *Huckleberry*, *Sheperdia*, and *Preparation for Gathering Fruit*.

AN ELEMENTARY TREATISE ON AMERICAN GRAPE CULTURE AND WINE MAKING, by Peter B. Mead. Illustrated with nearly 200 engravings drawn from Nature. Harper & Bros., N. York. The author professes that "indulging in no theorizing speculations, and introducing nothing of doubtful verification" he has treated "of all the facts and principles involved in the subject, laying them clearly in order before the student, and linking them together with just so much of the theory as is necessary to explain lucidly their relation to each other."

The work is handsomely bound and printed, as its intrinsic worth merits.

THE MARYLAND EDUCATIONAL JOURNAL—pledged to no party or system—School and Family Monthly, devoted to popular Instruction and Literature,—printed and published in Baltimore by E. S. Zevely, at \$1.50 a year; aided editorially by a committee of prominent educators. Specimen copies 15 cents. No. 114 West Baltimore street—business and editorial office at Cumberland, Md., where all letters, exchanges, &c., should be addressed. Number of P. O. box, Baltimore, 1072—Cumberland, 214.

It gives us pleasure to notice the appearance of such a Journal in Maryland, and hope it will receive such support as will insure its success. Its appearance and contents indicate the determination of those engaged in it to make it worthy of the all-important work of public education.

THE FARMER'S HOME JOURNAL is a handsome, and ably edited weekly, published at Lexington, Ky., by Miller & Marrs. \$3 per annum. The first number was issued 1st of May.

—The *Rural World* says that until the 4th of May there was no rain in the vicinity of St. Louis during the entire spring.

The "Moral Bearings" of Tobacco Culture.

The *American Agriculturist* suggests to its readers, that over-production of Tobacco during the war having led to unprofitable prices, "it is a good time for the growers to pause and consider the *moral bearings* of the crop, and its influence upon other products of the farm."

If the Prince of Darkness should take occasion to address himself personally to bringing Americans to his way of thinking, we are very sure he would find it politic to present any given subject, in the beginning, in its "moral bearings." That much our good opinion of ourselves demands, and such concession to our virtue being made, we take what follows easy enough. We confess to a growing repugnance to this mode of treatment *prima facie*, and our observation has long ago satisfied us, that preachers should do all the preaching, and stick to it, and other people should study to do their own business in quietness, and rely upon a wholesome example to do the share set them in evangelising the world. We eschew, therefore, these "moral bearings," and do not propose to reply to our contemporary on that score.

But the influence of Tobacco growing "upon other products of the farm," and upon the condition of the farm, is another matter. Let us give the argument of the *Agriculturist* on these points at large, and condemn his reasoning out of his own mouth. It is just the sort of remark we have all our life heard from careless observers, or shallow thinkers, about the destruction done by Tobacco to Maryland and Virginia lands.

He says: "The current of opinion as elicited at the last meeting of the Ct. Board of Ag., at New Haven, was decidedly against the crop, on economical grounds. It is not denied that a large sum of money may be realized by it, from a small plot of ground. But the general confession is, that it ruins all the rest of the farm, by leading the cultivator to neglect it. It demands large quantities of manure, and all he can make goes to the Tobacco patch, and he buys a good deal besides. The meadows run out, the pastures become barren, the orchard fruitless, and if the cultivator accumulates funds in the bank, as he may, it is by the ruin of his farm. Ten acres may be splendid, but the other hundred have gone to mulleins and burdock.

"The influence of this crop upon the community is quite as disastrous as it is upon the farm. The tobacco growing district grows poorer. Other farm crops decrease in quality and quantity.—Less stock is raised, less beef, pork, butter, and other necessities of life. The lands are all the while decreasing in agricultural value, and in its

capacity of sustaining a thrifty population. If a man makes money by the crop, sells out and goes to the city, the community loses by the depreciation the farm has undergone. The value of its taxable property is all the while diminishing, we apprehend, under the influence of this crop. Other crops, as a rule, bless the farm, and tend to make it more productive. They help to sustain animal life, and if consumed upon the soil, return more to it than was taken from it. But Tobacco is a blight upon the land that raises it."

"It is not to be denied that a large sum of money may be realized by it, from a small plot of ground." This, it is admitted then, is a good thing of itself. "But—it ruins all the rest of the farm." How? "By leading the cultivator to neglect it." Now this only proves that the cultivator is a very foolish fellow; for if he realises "a large sum from a small plot of ground," the Tobacco manifestly enables him to spend more manure and more labour on the remainder.

"It demands large quantities of manure." What of that, if it pays, too, for large quantities.

"If the cultivator accumulates funds in the bank, as he may, it is by the ruin of his farm." Now the Tobacco indeed furnishes the money for accumulation, but is it answerable for such accumulation, to the "ruin of the farm." It seems to us, it is only the same old folly that is too common the world over; men prefer investing in banks, when they should invest in improvement of their lands.

"Ten acres may be splendid, but the other hundred have gone to mulleins and burdock." The ten acres are "splendid" for no possible reason but the growing upon them of a very profitable crop, and others gone to ruin, only because this same profitable crop was not raised on them. Is this an argument against tobacco growing? The argument of the *Agriculturist* would lie just as forcibly against any crop that gives large products per acre, to large quantities of manure and skilful cultivation. In any such case, supposing ten acres to be the limit of the crop, that extent of surface would be heavily manured and a large amount of labour bestowed upon it, and it would become, in consequence, "splendid." It would be also very profitable and furnish the means to make "splendid" other "ten acres." Whether the cultivator might choose to do so, or prefer putting out his money in banks or otherwise, has surely nothing to do with the matter. He is furnished with the strongest possible practical argument for investing it in manures, and crops by which "a large sum of money may be realised from a small plot of ground."

Then it is asserted, that "the influence of this crop upon the community is quite as disastrous as it is upon the farm. The tobacco growing district grows poorer," &c. "Other farm crops decrease in quantity and quality." "The lands are decreasing in agricultural value," &c., &c. All these are assertions. If they are facts, what do they prove still but that tobacco growers are far less wise in all other matters than they are in growing a very profitable crop of Tobacco.

But the truth is, that all this talk is but a sly little sermon, by our virtuous contemporary, to discourage the growing of Tobacco; the growers being considered accessories before the fact, to the wickedness of using it. He starts out on "the moral bearings," but does not venture a "moral" word more, until he has proved, as he would have us think, that tobacco growing *don't pay*. And as if not quite confident of the force of his reasoning, he tries to move us further, at the close, by a hint of "blessing" and the contrary. "Other crops, as a rule, bless the farm." "But Tobacco is a blight upon the land that raises it."

We have been familiar all our lives with the same manner of argument about Tobacco growing in our own latitude, and have known always that it was very absurd. No crop is so well cultivated, none makes a finer preparation for grass seeds and clover, which should always follow, and none is less directly exhausting, or tends more to the general improvement of the farm, if the cultivator is wise enough to use properly the means it puts at his command.

If any one would make the trial, let him take two lots of ten acres each, and put them through a course of cropping under the same conditions of fertility and manuring, except that Tobacco is grown upon one lot and corn on the other, selling the Tobacco and small grain in one case, and the corn and small grain in the other. The result in dollars and cents, and in the condition of the land at the close, would determine the matter. If the money made from the Tobacco were spent some where else, and that from the corn on the land, there would be no proper comparison of their effects.

We do not advise beginners to enter on the cultivation of Tobacco, because it is a crop that demands skill and care, and, to engage in it to any extent, labour at command. But the circumstances of a great many persons make it profitable to them to bring their cultivation within a smaller area, and to grow such crops as may be largely increased, perhaps doubled, by an increase of manures alone; and Tobacco is one such crop. These need not, we think, be

detarded by the "moral bearings" of our contemporary, which seems to be, after all, largely involved in the matter of dollars and cents, unless he can support them by a better show of reasoning.

Catalogue.

We are indebted to Franklin Davis & Co., of the Richmond nurseries, for a copy of their catalogue, from the preface to which we make the following extract:

"A change has taken place in the labor system of the Southern States, and with it comes a change in the pursuits of many of her people. Many are looking and are undecided as to what they shall undertake. We believe that fruit growing offers greater inducements than anything else. Under this conviction we have gone largely into the business ourselves, and say to others 'go and do likewise;' and if you give it proper attention we will guarantee satisfactory returns.

"Almost fabulous prices are realized by fruit growers in Maryland, Delaware and New Jersey, yet we think a much better chance is offered to the people of Virginia. Take James River—say from City Point to Fortress Monroe—strawberries, peaches, apples, pears, &c., ripen there from three to four weeks earlier than they do in the vicinity of New York and the most of New Jersey. These fruits can be shipped to New York and other Northern cities weeks in advance of any competition from their respective localities, which gives the Virginia fruit growers the exclusive control of the best market during the best part of the season. To give an instance of what can be done in small fruits: William Parry, of Cinnaminson, New Jersey, sold, in 1864, from 22 acres of land, \$8,896 worth of strawberries, raspberries and blackberries. In 1865, from the same number of acres, \$9,100 worth. Allowing one-third to cover all expenses, it leaves a net profit of \$11,997 from 22 acres for two years, or an annual profit of \$272 per acre. This was done, too, in the midst of competition—thousands of acres being devoted in that State to the production of these fruits. If the New Jersey grower gets twenty (20) cents per quart for his small fruits, and two (\$2) dollars per bushel for his peaches, he thinks he is doing well, yet not unfrequently the berries shipped from Norfolk bring from \$1 to \$2 per quart, and peaches \$6 to \$8 per bushel. The question is often asked, will not the markets soon be overstocked with fruit? We say, *emphatically*, no! While the production of fruit has been greatly increased in the last twenty years, the demand has been greater than the

supply. Much better prices are now obtained than ever before. We could give reasons why we think the business will improve, but space will not allow us to dwell on the subject.

"Now, all the region of country east of the Blue Ridge, in proximity to railroads or steam-boat navigation, might be very profitably employed for this purpose. We would say to those in the tide-water region, plant *early* varieties, they will pay you the best; and to the people westward we would say, after supplying your local markets, plant mostly of winter apples and grapes—you will find it profitable to ship them to this and other markets. We have a fine stock of trees growing that will be ready for market the ensuing fall; and to those who are desirous of planting, or feel an interest in horticulture, we cordially invite you to call and see our stock. See *Advertisement*.

A Maryland Milk Dairy Farm.

[We have intended for some months past to take an early opportunity to give a personal inspection to the Dairy Farm and operations of Mr. Ross Winans, with a view to give our readers some account of them. Other engagements have obliged us to forego the pleasure we should have taken in doing so, and we find prepared to our hand by the intelligent Junior Editor of the *Country Gentleman* an article published in that journal, from which we make the following extract.—ED. FARMER.]

"At the time the war came on in 1861, amidst the uncertainty and excitement that prevailed, the purchase of land seemed to be about the only mode of investment in order to secure what was tangible and substantial in exchange for the money invested. Mr. Winans ascertained that property could be had along the Patapsco river, possessing the double advantage of railway and water communication with the city, at a distance of only five or six miles, and though much impoverished, naturally of good quality, and in surface excellently adapted for the use of machinery—beautifully undulating throughout, and affording drainage even where nearest a level. He obtained one or more farms, to which various additions have since been made, until the total area now in his possession there, is not far short of seven hundred acres. He had previously owned and carried on for several years, a farm of not quite an hundred acres near the city. At first keeping but one or two cows to supply his own family with milk, he was induced to spare small quantities as a favor to friends, and had kept slowly increasing the number until, with-

out any previous design, it occurred to him that the milk business was carried on in a way open to many objections, and he began to make experiments and plans in the direction of entering upon it in a more systematic and thorough-going way. At the same time other business having been deranged by the war, he disconnected himself with former undertakings, and was at liberty to devote his time to the subject.

The system at present adopted has thus been the gradual outgrowth from four or five years of constant experiment. I must speak of generalities just now, but have prepared some sketches to appear with fuller details hereafter. And, first, as regards the land :

In early life Mr. Winans was himself a farmer, and from experience then, as well as reasoning, he had full confidence in the power of liberal manuring to compel the land to give up its stores of plant food at man's bidding. There was a double object to be accomplished—the production of a better sod which would make a crop of hay worth the cutting, and the destruction of the weeds with which the land was overrun. Both these ends were to be brought about, he thought, by such a liberal application of manure, accompanied by abundant seeding, that the ground would yield its utmost product of valuable herbage, while valueless intruders would be stifled out through the greater strength of the grass, and its ability to thrive under repeated cuttings which they cannot bear. I have before me a schedule of cash payments for stable manures purchased of the various railways and express companies and others, including items of from \$1000 to \$2500 at a time, and aggregating an amount which would frighten most beginners. Bought in so wholesale a way, of course the cost price was lower than it would have been for smaller quantities, but the cash thus paid out was less than the transportation and labor of getting it on to the land, so that the sum total, together with expenditures for plaster, lime and ashes, altogether amounts to more than the original price paid for the farm. This was, on an average, not quite \$15 per acre.

It was not sufficient to buy—Mr. W. perceived the importance of making a heavy stock of manure beside. When, therefore, the project of keeping a milk dairy on a large scale came up, it was embraced as the best means offering, and as a temporary expedient in bringing the land up as a hay-farm, which was believed to be the best purpose to which it could ultimately be devoted, involving the least personal supervision in future years, and ensuring a reasonable return for the outlay required. And I may say here

that this purpose has been subserved; and though, as we shall see, in itself a satisfactory undertaking, Mr. Winans has now passed the limits of three score years and ten, and naturally desires to avoid for himself and household the superintendence and labor involved in the proper management and daily sale of 400 to 425 gallons of milk in the various lots demanded by customers.

The fact that one chief end of the stock was to contribute, as just stated, toward the recuperation of the farm, did not induce so close a thinker to neglect their welfare, or content himself with other results of an inferior or even mediocre character. While they were to be in his hands, he determined to solve the problem of combining their highest comfort and largest productiveness—two objects, indeed, in his opinion, as in that of good farmers generally, that are indissolubly connected. And as he proposes soon to go abroad for some time, and, just now, beef is relatively higher than milk, he is gradually working off his stock, and it is thus the more desirable that the experiments he has carried out should be placed on record for the benefit of others. And while, as I said, the sale of milk is believed to be remunerative under the management we are to describe, I must, in sincerity, add that, as a business for one who is accustomed to the high standard of complete integrity in all his dealings, this has one serious and very unpleasant drawback. The custom of diluting milk is so universal that the honest man is, as it were, driven out of all connection with a dishonest traffic. Mr. Winans, for example, disposes of his milk, of course, to retail dealers, and he has never sold to them at less than 30 cents per gallon. They can buy of others at 25 cents, but have preferred to pay him his price, because they could water a pure article more than one that was already somewhat diluted. No responsibility for their acts can rest on his shoulders, it is true; but when any pursuit is carried on, at least partially for mental and physical recreation, one likes to avoid all connection, however remote, with anything that is not open and above-board. This unsavory reputation does adhere to the trade in milk, and to that reason in all likelihood, we may ascribe the fact that it is in the hands of a class of dealers in very low position, both morally and pecuniarily.

I said that though rendered somewhat familiar by correspondence, with what Mr. Winans has done, I did not realize it as I have come to do by personal examination for a few days past. Let me illustrate by a few figures I am permitted to copy from his books:

SALES OF MILK BY MR. WINANS FOR ONE YEAR
TO MAY 1ST, 1867.

Month of May, 1866.....	\$ 3,421 45
June.....	3,555 93
July.....	3,558 91
August.....	2,371 03
September.....	2,194 75
October.....	3,047 56
November.....	3,176 45
December.....	3,104 60
January, 1867.....	3,086 28
February.....	3,020 78
March.....	3,373 08
April.....	3,709 91

Total sales of milk for twelve months.....\$37,630 71
Sales of cows and calves for same period....11,988 08

Purchases of cows and heifers, same time... \$49,616 79
\$49,616 79
Purchases of cows and heifers, same time... 9,098 66
\$40,518 13

It is only since the first of May, (and therefore not included in the foregoing statement,) that Mr. Winans has begun to reduce his stock, and the sales given only include the usual surplus of the year. Moreover, although no count or inventory was taken at the two dates referred to, it is estimated that the number of cattle on hand was 15 or 20 greater May 1st, 1867, than May 1st, 1866. Their value is to be added to the above figures, as is also that of 100 tons hay sold at \$38 per ton, (\$3,800,) and about 220 tons estimated now on hand—so that it is easy to see that the aggregate production of the year may be safely put down at \$50,000. The cost of feed, mainly bran or shorts and Indian corn, and that of labor on the farm and in the stables and dairy, are of course to be deducted. If we add the value of the manure produced, and charge it over to the cost price of the farm, it will somewhat increase the latter, and so much enlarge the yearly profit. Indeed the present value of the 700 acres may be fairly rated at \$200 per acre, and this is just about what has been invested—say \$50,000 in the cost of land, \$67,000 in manures and fertilizers, purchased and produced, including transportation and labor, \$20,000 in buildings, and \$3,000 in fencing. These are round numbers, but will serve the purpose of illustrating the scale on which the operation has been conducted.

On visiting the two farms, we found them in excellent condition. The standard grass crop, though backward, (mowing begun May 20th in 1866,) bids fair to exceed that of last year. And as to last year's crop, I can only say that it filled forty-five barns, rated at 40 tons each, being an aggregate of eighteen hundred tons—the largest hay crop I remember to have seen on record cut by an individual in a single year! The estimate can be tested in this way: 300 head of cattle and 30 horses were fed on hay all the year round, and

320 tons were sold or left over—which would account for an average consumption of less than 25 lbs. hay per head per day. Now, as to the surface on which this crop was grown: The two farms together have about 760 acres, of which there is one considerable patch that is still wet and not in order, leaving, with other deductions, less than 700 acres to mow—probably not over 650—so that the crop, at the lowest figures, was over two and a half tons to the acre. So much for liberal manuring!

This year three more barns are to be put up, and it is hoped that the crop will be nearly or quite *two thousand tons*.

The stables are in the city, and contain stalls for 220 cows. I shall give a drawing and description hereafter, but cannot forbear sending on a few figures now, in order to draw attention to what may follow. The number of cows actually milked has varied from 180 to 200 for two years past, while nearly 100 more are kept at the farm to draw upon as circumstances require.

The average yield of milk per cow per day, when tested, has been about two and one-tenth gallons, but no record has been kept showing the average number of days in the year which each cow has been milked. It may be computed from the facts that are satisfactorily ascertained, however, to be very nearly 315 days; and, upon this basis, we shall make an average yearly yield of 2,637 quarts per cow, which for an establishment of such extent, I need not say is exceedingly large. Most of these calculations, I should add, are my own, from the data furnished by Mr. Winans' books, and they are not made up with any other view than to get at the exact facts of the case. Many of the cows very much exceed the average, and I copy the following from the records of a number which attracted my attention as we passed through the stalls:

Average daily yield of milk of several cows, from a record kept of the amount they gave at intervals of about three times per month—in quarts and hundredths:

No. 30, cow fresh May 8, 1866, to May 10, 1867....	11.37
No. 147, " Jun. 27, 1866, to " 11, 1867....	11.49
No. 191, " Apr. 20, 1866, to " 4, 1867....	12.22
No. 101, " Nov. 21, 1866, to " 1, 1867....	10.96
No. 215, " Nov. 28, 1866, to " 9, 1867....	13.85
No. 122, " Dec. 17, 1866, to " 2, 1867....	12.65

These six cows has thus averaged a fraction over 12 quarts each per day for periods varying from about 5 months in the last (No. 122) up to two days over a full year in the first (No. 30.) Of the fresher cows I might add a list of 16, which dropped their calves at intervals during January and February, and up to March 13th, which have averaged over 16 quarts of milk daily

to each cow. A third list might include 14 heifers, with their first calves, which have now been in milk from one to six months, and have averaged 13 quarts per day each.

I must drop the subject here for the present. But it should be stated that all Mr. Winans' farming, the construction of his buildings, and the selection of his cattle, have been done with a purely practical aim, nothing is anywhere spent for ornament or effect, but everything for utility, and the design has been to adapt one thing to another, so as to yield the best return from a given source. As to his stables, I have never seen cows apparently in better health and condition, and more thoroughly at their ease, even in our best herds of breeding cattle; as to his farm, I do not recall a case in which I have found an equal area more free from weeds, or yielding a heavier product.

DUNN'S ROCK, N C., June 13, 1867.

Editor of American Farmer:

DEAR SIR: Your experience is necessarily of that kind which may be termed "reliable," and I should be glad to avail myself of it for myself and one or two friends, on the subject of Texas. Would it be presuming too much to ask you to insert a few lines in the July number of the "Farmer" with special reference to the following particulars:

The most healthy part of Texas.

The average summer temperature.

The price at which a desirable tract of land could be bought, with improvements or without.

If the country is in as depressed a condition as the South generally is.

In a word, any information that would be useful to families contemplating a permanent settlement in Texas.

Would sheep farming be profitable?

I have examined carefully the back numbers of the "Farmer," and can find little or no information on the subject of Texas, and think that you may not, perhaps, object to the introduction into your columns of a few remarks, that I know will be acceptable to some of your subscribers.

MELROSE.

As we are not sufficiently informed to make a satisfactory reply to the above, we refer it to our friend, Thos. Affleck, Esq., or some other Texan, who may favour us with the information sought.

—Editor Farmer.

The Fair of the New Hampshire State Agricultural Society is to be held at Nashua, Sept. 10, 11 and 12.

Straw for Feeding.

We find in the papers the following paragraph, attributed to Dr. Dadd, the veterinary surgeon of Boston :

"I have often noticed," he says, "that sick horses will eat oat straw in preference to any other kind of fodder. Oat straw contains a vast amount of nutrimental matter, and some phosphates, and when converted into a sort of bran, by means of millstones, is a very nourishing diet. This sort of aliment is very useful when combined with ground oats, for animals whose systems lack the requisite amount of phosphates, &c."

What the doctor remarks of sick horses he might have extended as well to horses in health, and to other animals; with all of which, without exception, so far as we know, it is a favorite fodder. Both oat straw and wheat straw are much too commonly slighted as articles of fodder, and thought to be fit only for litter. This observation was forced upon us many years ago when inspecting the beautiful short horns of Mr. Beltsheover, near Baltimore, which many of our readers may remember. With racks well filled with the best timothy, they might be seen to turn to the clean oat straw thrown under them for litter; indicating to the host of the Fountain Inn, that as he, at his own table, as we noticed the same day, even in the presence of turkey and beef, did not despise the bacon and greens, so did not they despise the change made by the straw from their daily dainties of best hay and steamed grain.

We think it very extravagant to say that oat straw contains "a vast amount of nutrimental matter." No working animal can be maintained on it for any length of time without grain; but with a due amount of grain, it furnishes, with some nutriment, the *bulk* required to make the best food a horse can have. We know good horse-masters, too, who, feeding moderately on corn in winter, do not care to have other long food than clean wheat straw.

The suggestion of grinding the straw "into a sort of bran" is very absurd, and based, we suppose, on the extravagant estimate of the nutriment it is designed to develop. It does not appear that either horses or cows fail to digest the straw in its natural state. The act of mastication so essential to digestion, seems quite sufficient for its proper reduction. If it were not, the cost of grinding would, under no ordinary circumstances, be compensated by the increased power of nutrition. It would be worse than the extravagance, which some years ago sacrificed

thousands of dollars in the purchase of machines for grinding corn-cobs. Corn-cobs show, on analysis, some nutrient matter, but not enough to pay for grinding. Some gold mines do not pay the cost of working them.

As to Dr. Dadd's remarks on "animals whose systems want the requisite amount of phosphates," it seems to us far too learned for the occasion. We have heard a great deal of this scientific talk of the need of phosphates, and supplying this or that particular article of diet to cure the deficiency. Plain people should learn that a cow, whose system "wants the requisite phosphates," is a poor beast, that has not had a sufficient supply of any good food known to cows or cow-keepers. Then they will not need Dr. Dadd to tell them that oat straw and ground oats would be very good aliment. So would corn blades and corn meal be excellent aliment; or even good wheat straw and a daily supply of bran. In summer, any good grass lot would supply all the phosphates her system might require. All articles known to us as good food for animals furnish, if given in proper quantity, enough of this essential ingredient. This fact is sufficient for our guidance under ordinary circumstances. The cow, besides the phosphates she may require in common with other animals, yields a large quantity in her daily flow of milk. It is a proper subject of scientific inquiry whether the variety of food which is found in experience to be most productive of milk is that which contains the largest percentage of phosphates.

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The Power of a Growing Tree.

Walton Hall had at one time its own cornmill, and when that inconvenient necessity no longer existed, the mill-stone was laid in an orchard and forgotten. The diameter of this circular stone measured five feet and a half, while its depth averaged seven inches throughout; its central hole had a diameter of eleven inches. By mere accident, some bird or squirrel had dropped the fruit of the filbert tree through this hole on to the earth, and in 1812 the seedling was seen rising up through that unwonted channel. As its trunk gradually grew through this aperture and increased, its power to raise this ponderous mass of stone was speculated on by many. Would the filbert tree die in the attempt? Would it burst the mill-stone, or would it lift it? In the end the little filbert tree lifted the mill-stone, and in 1863 wore it like crinoline about its trunk, and Mr. Waterton used to sit upon it under the branching shade.—*English Paper.*

Too Rich for Wheat.

We were told lately, by a farmer, whose experience lies in one of the finest districts of Maryland, that the most uncertain portions of the lands of his neighborhood, for wheat, were those which were richest, viz., the bottom lands. He spoke of the clover fallow of a neighboring farm which averaged forty-two bushels of wheat to the acre, on a fifty acre field, and thought that this would not be an unusual thing but for the uncertainty of the bottom lands. When they yield well the result was always a heavy crop, but the average was often greatly reduced by their failure. The hills and hill-sides very seldom failed. This result as to the bottom lands did not take place when corn was the crop: with this there was rarely a failure. Our friend had formed the opinion that land might be too rich for wheat but not for corn.

When we called to mind how often crops of this grain had, elsewhere, even exceeded the heavy average named, and that sixty and even seventy bushels have been often reached, we could not concur in this opinion. But the fact may be well accounted for, we think, by imperfect drainage. There is always, as is very apparent, excess of moisture, even in the driest of such lands. In the summer season there may not be more than sufficient for a heavy crop of corn, but in winter it will be very likely to cause the throwing out of the wheat in freezing and thawing, and especially subject it in summer to destruction by rust.

It will be remarked that what is here vacant is not land in any degree swampy, for no one would think of putting wheat in such land. It is quite dry enough, in all ordinary seasons, to plow well, and sufficiently drained to draw the water readily from the surface, but there is too much moisture in the subsoil, and when the sun gets much power in the early summer, it makes just the condition of things favorable to rust. Moreover, the wheat is always more succulent here and keeps green longer; both circumstances favoring the attacks of rust. We should be glad to see experiments made in draining these bottoms.

Mr. John Johnston said, some years ago: "I did last year what I never did before; that was plowing up wheat stubble and sowing again with wheat. It is a respectable looking crop now, but if you saw the half of the field that I sowed salt on, say a full barrel to the acre, I am almost sure you would order forty or fifty barrels of second quality of salt to sow in September or October. The salted wheat stands much thicker

on the ground, is considerably taller, came in ear fully four days before the other, and altogether looks richer every way; and as I had not salt enough to sow the whole field, I sowed the half that has hitherto brought the worst crop, and latest in ripening. Now it is much the best. I can stand in the middle of the field and look forty-five rods each way, and see distinctly how far the salt came; or I can ride or walk down the side of the field not salted, and see the line as plainly as if on the one side was corn and the other wheat. If this won't make men experiment with salt I don't know what will."

Salt may be made very useful in economising manures, as directed in the Gardener's Chronicle: Dissolve common salt in water, sprinkle the same over your manure heap, and the volatile parts of the ammonia will become fixed salts, from their being united with the muriatic acid of the common salt; and the soda, thus liberated from the salt, will quickly absorb carbonic acid, forming carbonate of soda; thus you will retain with your manure the ammonia that would otherwise fly away, and you have also a new and most important agent introduced, viz., the carbonate of soda, which is a powerful solvent of all vegetable fibre.

It is matter of surprise that opinions among scientific as well as practical men should be so unsettled as to a substance so familiar as common salt. It would be well to have it freely experimented with, and we especially wish to see its effects tested on the bottom grounds considered too rich for wheat.

Why Scalded Meal is More Nutritious than Raw.

The nutrient afforded to animals by seeds and roots depends upon the rupture of all the globules which constitute their meal flour. These globules vary in different roots, tubers and seeds. Those of potato starch, for instance, are usually from fifteen ten-thousandths to the four-thousandth part of an inch; those of wheat really exceed the two-thousandth part of an inch, and so on. From experiments made on these globules by M. Rapsail, the author of "Organic Chemistry," and M. Boit, of the French Academy of Sciences, the following conclusions have been drawn:

1. The globules constituting meal, flour and starch, whether contained in grain or root, are incapable of affording any nourishment as animal food, until they are broken.
2. That no mechanical method of breaking or grinding, is more than partially efficient.
3. That the most efficient means of breaking

the globules is by heat, by fermentation, or by the chemical agency of acids or alkalies.

4. That the dextrine, which is the kernel, as it were, of each globule, is alone soluble, and therefore alone nutritive.

5. That the shells of the globules, when reduced to fragments by mechanism or heat, are therefore not nutritive.

6. That though the fragments of these shells are not nutritive, they are indispensable to digestion, either from their distending the stomach or from some other cause not understood; it having been found by experiment that concentrated nourishment, such as sugar or essence of beef, cannot long sustain life without some mixture of coarser or less nutritive food.

7. That the economical preparation of all food containing globules or fecula, consists in perfectly breaking the shells, and rendering the dextrine contained in them soluble and digestible, while the fragments of the shells are at the same time rendered more bulky, so as the more readily to fill the stomach.—*Selected.*



Necessity for More Reliable Experiments.

We have had theories of agriculture without end, propounded for our consideration; innumerable guesses have been hazarded upon every conceivable topic; inclusive of experiments, which no man can number have been made, and yet, to our shame be it spoken, there is scarcely a single question which has been mooted in American agriculture, that can be said to be settled on the sure basis of reliable experiments.

Many of our indigenous grasses have never been analyzed. There is a hopeless discrepancy between the analysis which have been made in Europe and America. Thus, by the analysis of Mr. Way, in England, the ash of timothy gives 11 per cent. of the phosphates and 24 per cent. of potash. According to the analysis of the same grass, made by Mr. Salesbury, under the direction of Prof. Emmons, at Albany, it contains 16 per cent. of the phosphates and 36 per cent. of potash.

COMPARATIVE VALUES OF FOODS—ACTUAL TRIALS AT THE MANGER.

The theoretical value assigned by Boussingault to rye straw, in comparison with English hay, was 479 lbs. That is, 479 lbs. was equivalent to 100 lbs. of English hay. Fresenius, as the result of his analysis, gave 527 lbs. of straw as equivalent to 100 lbs. of hay. Boussingault makes 319 lbs. of potatoes, 70 lbs. of Indian corn, and 60 lbs. of oats, each equivalent, in nutritive principles, to 100 lbs. hay. Fresenius

makes 330 lbs. of potatoes and 58 lbs. of oats equivalent to 100 lbs. of hay. If we compare the equivalent values of different species of food; deduced from actual feeding of animals, we find the confusion even worse confounded. Block makes 216 lbs. of potatoes equivalent to 100 lbs. of hay; Petri, 200 lbs.; Meyer, 150 lbs. Block found 39 lbs. of oats equivalent to 100 lbs.; Petri, 71 lbs.; Thaer, 86 lbs.; Pbaes, 60 lbs.; Scheveitzer, 37½ lbs. I have searched industriously for chemical or experimental researches in this country, with which to compare the discordant results of Europe, but I am compelled to confess that if such exist, I have been unable to find them.

Chemical analysis indicate that timothy has twice as much muscle making nutrient, and twice and a half as much fat making nutrient, as sweet-scented vernal grass. It has 25 per cent. more muscle making power than Kentucky blue grass, or than Fescue grass; but I cannot find that this has ever been verified experimentally either in Europe or America.

CORN.

We learn from analysis of Mr. Salisbury, that 100 lbs. of the Ohio Deut corn contains 8.58 lbs. of flesh forming principles, and 60.34 lbs. of fat and heat forming principles—while 10 lbs. of the small eight-rowed corn contains 13.80 lbs. of flesh forming, and 44 lbs. of fat and heat forming principles. Now, if such difference really exist in these varieties, farmers may make a great deal of money by knowing it. But they do not know it, or even suspect it; with them, a bushel of corn is worth a bushel of any other corn, just as much as one gold eagle is worth another; and yet we see, if Mr. Salisbury's analysis is reliable, 100 lbs. of the eight-rowed corn will lay 25 per cent. more muscle upon a hog or a bullock than the Ohio Deut.

There is not a single experiment upon record which has, for its object, the verification of this chemical indication by actual feeding. If the fact were once reliably proved, the knowledge would be worth half a million dollars annually to the farmers of the State.

MANURES.

If a load of horse manure, a load of cow manure, and a load of hog manure, should be offered to a farmer, each at a specified price, he could not tell which would be the cheapest.—There is not a farmer in the State that knows exactly what profit he can make upon a load of any kind of manure.—*From Address of J. Stanton Gould.*

Hints on Manures.

We reproduce some useful hints, for which we are indebted to a practical man, whose experience has authorized him to give his opinions. It will be observed that he economizes and preserves, in the best manner, the manure from horses, cattle, sheep, hogs, poultry, all under a uniform system of management. While exception may be taken to some points of his practice, it cannot be denied that on the whole it deserves high commendation:

First, the horse stable is kept well littered with dry leaves, applied, sometimes, as often as once a week; at others, only once a fortnight. When the stalls get about twelve inches deep in manure, they are emptied by first throwing the manure into the stable passage with the dung forks, and then carrying it in wheelbarrows into an adjoining shed, to remain until wanted for the land. This removal and spreading checks the fermentation and the consumption by *fire sang*, to which stable manure is liable, except under careful management, and saves it from being soaked with rain water.

The cattle are penned on the same spot every night in the year, in a square yard, with an open shed on its north side, fifteen feet wide. This shed and lot are regularly littered, and the manure never disturbed but three times in the year.

The sheep lot adjoins both horse and cow lots, and is regularly littered, and the sheep are penned in it every night in the year. This lot has also a house on the north side, and in this house the sheep are salted three times a week, the year round, and fed every night during the winter.

To the objection made to penning on the same spot throughout the year it is answerable that sheep are not safe from dogs in the fields or in the hurdles, but are safe in a lot immediately adjoining the other stock. It is also objected that the labor of moving the pens and hurdles during the busy season makes it liable to be neglected.

Into the horse lot, which is also littered, the hogs are called and fed every night, if it is only a nubbin to each. Here they sleep, and are turned out every morning. In the winter, the hogs fattened to kill are penned upon leaves, and then a load of manure is made to every hog, and the loads are always a four horse wagon body full.

The chicken coop is littered with a little fine straw, occasionally sprinkled with lime, (plaster would be better,) charcoal dust or ashes. This is considered equal to guano, pound for pound, but rarely finds its way to the farm, being thought the best manure for onions, tomatoes, Irish potatoes, &c.

Behind the stable is a pen built of logs, into which is thrown occasionally a load of leaves, and upon these leaves are thrown all the leached ashes of the farm, all the dead chickens, pigs, rotten eggs, sweepings of the house-yard, soap-suds, now and then a peck of salt, the slops from the chambers daily, and all kinds of bloody water or slops that the hogs will not eat.

The manure is never touched till it is dry, and only hauled out when the land is dry. In this way the loads seldom contain less than eighty bushels.

The manure is never put down in heaps, or little conical piles, to be scattered hereafter. It is scattered from the wagon broadcast, and ten or twelve wagon loads cover an acre; of horse lot manure, only trampled leaves, twenty wagon loads are put on; of good dry and pulverized stable manure, about eight hundred bushels, or eight to ten wagon loads per acre.

We have given these items of manure management as an example for large or small farmers, who have heretofore been careless in the matter. Some extra work of course will be required to supply the large amount of litter. One hand on a large farm would be sufficient for the purpose and do a good many other useful jobs. On a grain farm, a proper use of the straw and stalks will amply supply the place of leaves. Not only will a great quantity of good manure be manufactured, but the stock of every description will be greatly benefitted by the abundant littering.

Forking Barnyard Manure Over.

This is essential to rotting well. When corn stalks, straw and ordure of animals are all trod down firmly during the winter and spring, the air is effectually excluded, and the material will not rot until it has been forked over, were it to remain there for a year or more. If it is loosened up so that the air can circulate among it, the entire mass will decay in a few weeks, so that it will be easy to pitch and spread it. Now, the most expeditious manner of pitching manure up clean from the bottom is to do the greater portion of it with a horse fork. Set up three long poles as for pitching hay on a round stack, and make a hole down to the bottom of the manure first; then thrust the tines of the horse fork under the manure, and turn it up in large rolls, and tear it to pieces with hand forks. Horse forks are of great service where the manure is very long. After it has rotted, a man, or two men, can pitch much faster by hand. If barnyard manure remains in the yard all summer, it should always be forked over to facilitate the de-

cay of corn stalks and coarse straw. But it should be protected from rain. Some farmers pitch long manure in the wagon with horse forks. But I never could perceive that the practice would pay, because a horse fork will not hold as much as a horse is capable of elevating. It is easy for any one to try the experiment, which will soon satisfy all anticipations or doubts on this subject.—*North British Agriculturist.*

Compost.

A correspondent of the *Germantown Telegraph* gives the following sensible advice:

"A majority of farmers do not attach importance enough to the subject of saving and making manure and compost. To them manure and labor are what capital and credit are to the merchant. They think they cannot afford to pay five and six dollars per cord for manure, and it does seem a high price; but one thing they can do, they can take better care of what they have, and prevent the waste of what is the most valuable part. Many hog pens are built on sloping ground, the manure sinking away to some drain and lost. Now with proper care the manure of every hog raised and fattened is worth twenty dollars to put in corn hills. It is better not to let hogs wallow in the manure, as most of farmers do, with the view that the hogs will work fine the coarse trash generally thrown into the pen. Make a tight board floor to the pen to prevent the leakage of the urine and manure, then throw in the absorbents, such as weeds, straw, shavings, sawdust, leaves, chip dirt, briars, and in fact almost fine hickory brush, clean the sty out once a week, and throw the manure into a square pile, exposed to all the rain that falls, and in a dry time keep the manure moist by the addition of water, or cover with damp earth to prevent the 'blue blazes.' By this arrangement, with ten hogs and plenty of material, a farmer will make near two hundred dollars' worth of manure ready for the land in good condition, and have better hogs than if he allowed them to wallow at pleasure in the mass."

CHARCOAL FOR TURKEYS.—A California paper says a recent experiment has been tried in feeding charcoal for fattening turkeys. Two lots of four each, were treated alike, except for one lot finely pulverized charcoal was mixed with mashed potatoes and meal, on which they were fed, and broken pieces of coal also plentifully supplied. The difference in weight was one and a half pounds each, in favor of the fowls supplied with coal, and the flesh was superior in tenderness and flavor.

Sunday Reading.

The militant and the triumphant are not two churches; but this the porch, and that chancel of the same church, which are under one head, Jesus Christ: so the joy and the sense of salvation, which the "pure in heart" have here, is not a joy severed from the joy of heaven, but a joy that begins in us here, and continues, and accompanies us thither, and then flows on, and dilates itself to an infinite expansion; the plenary consummation thereof being respited till we "see God."

It is no brag to say that the ministry of the gospel is more glorious than that of the law. God would have everything in the last temple more glorious than in the first, which was figured by the outward frame; more glorious in Christ's time than that of Solomon, as that was beyond the tabernacle. This is a "better testament." That had the shadow—this is the substance.

No bound or measure can be assigned in the reception of divine grace, as is the case of earthly benefits. The holy spirit is poured forth copiously, is confined by no limits, is restrained by no barriers: He flows perpetually; He bestows in rich abundance. Let our hearts only thirst, and be open to receive Him, as in proportion to the capacious faith we bring, will be the abounding grace we receive.

Nothing can be our happiness in this life, but what is to be the foundation of it in the next. If I cannot serve God and my Saviour with delight, and make a kind of heaven of it here, He has no other heaven for me hereafter.

Make not the hungry soul sorrowful; defer not the gift to the needy; for if he curse thee in the bitterness of his soul, his prayer shall be heard of Him that made him.

Praise for pensiveness, thanks for tears, and blessing God over the floods of affliction, makes the most melodious music in the ear of heaven.

How did the martyrs glory in their sufferings for Christ? calling their chains of iron chains of gold, and their manacles bracelets.

The tree of life, said the holy Hyperichus, grows in heaven; and humility is the grace that climbs and touches the top of it.

I do not understand those for poor which are vagabonds and beggars, but those that labor to live, such as are old and cannot travel, such poor widows and fatherless children as are ordered to be relieved, and the poor tenants that travel to pay their rents, and are driven to poverty by mischance, and not by riot and careless expenses: on such have those compassion, and God will bless thee for it.

How silly it would be to envy a man that was drinking poison out of a golden cup: and yet who can say that he is acting wiser than this, when he is envying any instance of wordly greatness?

For those, who mix in the world with safety, there is needed just the reverse of the very gifts which make men the worlds' favorites, namely, gifts of caution, retirement, and silence.

When injured by any one, we should remember that God presents to us the most glorious opportunity of showing forth his own image, mercy and forgiveness.

Endeavor to subdue all thy irascible, as well as concupiscent, affections; the sum of all humanity and the height of moral perfection is "bear and forbear."

The love of one's friends is common to all religions; the love of one's enemies is characteristic of christians.

Heaven is the universal measure of all things earthly. Riches, pleasures, honors, will not profit there.

Happy the soul that, in the lucid intervals of a wounded conscience, can praise God for the same.

Blessed is he, O Lord, who loveth Thee, and loveth his friend in Thee, his enemy for Thee.

Music is sweetest near or over rivers, where the echo thereof is but rebounded by the water.

God has two thrones; one in the highest heavens, the other in the lowest hearts.

The joy of the world is nothing but the impurity of sin.

He sure is rich, that has the key to God's treasury.

Every seed contains three principles, the organ of nourishment, the nascent plant or plu-mule, and the nascent root or radicle.

The annual fair of the Indiana State Agricultural Society will be held at Terre Haute, commencing Sept. 30th.

Baltimore Markets, June 29, 1867.

COFFEE.—Rio, 16a18 $\frac{1}{2}$ cts. gold, according to quality.—

Laguna—, and Java —.

COTTON.—We quote prices as follows, viz:

Grades.	Upland.	Gulf.
Ordinary.....	22	—
Good do.....	23	—
Low Middling	24	—
Middling.....	25	—

FERTILIZERS.—Peruvian Guano, \$80; Patapisco Co's \$60 Reese & Co's. Soluble Pacific Guano, \$65; Flour of Bone \$60; G. Ober's (Kettlewell's) AA Manipulated, \$70; A do., \$60; Ammoniated Alkaline Phosphate, \$55; Alkaline Phos, \$45; Baltimore City Company's Fertilizer, \$40; do., Flour of Bone, \$60; do., Ground Bone, \$45; do., Poudrette, \$20; Baugh's Raw-bone Phosphate, \$56; Maryland Powder of Bone, \$50; Andrew Coe's Super-Phosphate of Lime, \$60; —all per ton of 2,000 lbs.; Pure Ground Plaster, \$13.50a \$14.00 per ton, or \$2 50 per bbl. Shell Lime, slackened, 6c., unslacked, 10c. per bushel, at kilns.

FISH.—*Mackerel.*—No. 1, \$3a8.50; No. 2, —— No. 3, ——. *Herrings.*—*Labrador,* ——; *Potomac* and *Susquehanna*, ——; *Codfish*, 5a5 $\frac{1}{2}$ cts. per lb.

FLOUR.—Howard Street Super and Cut Extra, \$10.25a ——; Family, \$14.50a5.50; City Mills Super, \$9.00a 11.00; Baltimore Family, \$17.00.

Rye Flour and Corn Meal.—Rye Flour, new, \$7.75a 8.25; Corn Meal, \$5.75a6.00.

GRAIN.—*Wheat.*—Good to prime Red, \$2 20a2.50; White, \$2.35a2.50.

Rye.—\$1.30a\$1.40 per bushel.

Oats.—Heavy to light—ranging as to character from 84 a86c. per bushel—bulk.

Corn.—White, \$1.06a\$1.07; Yellow, \$1.06a—— per bushel.

HAY AND STRAW.—Timothy \$2a28, and Rye Straw — per ton.

PROVISIONS.—*Bacon.*—Shoulders, 9 $\frac{1}{2}$ a10 cts.; Sides, 12a12 $\frac{1}{2}$; Hams, plain bagged, 15a16 cts.; sugar cured, 16 $\frac{1}{2}$ a17 $\frac{1}{2}$ cts. per lb.

SALT.—Liverpool Ground Alum, \$2.10a—; Fine, \$3.10; Turk's Island, \$5a60c. per bushel.

SARDINES.—Buckwheat \$2.00 per bushel.

TOBACCO.—We give the range of prices as follows:

Maryland.	
Frosted to common.....	\$1.50a 3.00
Sound common.....	3.50a 4.00
Middling	6.00a 8.00
Good to fine brown....	10.00a15.00
Fancy.....	17.00a25.00
Upper country.....	3.00a30.00
Ground leaves, new.....	3.00a5.00

Ohio.

Inferior to good common.....	3.00a 6.00
Brown and spangled.....	6.00a12.00
Medium to fine red and spangled.....	8.00a20.00
Fine yellow and fancy.....	20.00a30.00

WHISKEY.—30a36 cts. per gallon, in barrels, in bond.

WOOL.—We quote: Unwashed, 27a30 cts. per lb.; Tub-washed, 42a45 cents; Fleece, 40a48 cents; Pulled, No. 1, — cts.; Merino, — cts.

CATTLE MARKET.—Common, \$7.00a\$7.75; Good, \$8.25a

\$8.75; Prime Beees, \$9.00a9 25 per 100 lbs.

Sheep.—4 $\frac{1}{2}$ a5 $\frac{1}{2}$ cents per lb. gross. Lambs \$3.00a3.75 per head.

Hogs.—\$10.00a10.75 per 100 lbs., net.

Wholesale Produce Market.

Prepared for the American Farmer by HEWES & WARMER, Produce and Commission Merchants, 67 Exchange Place.

BALTIMORE, June 20, 1867.

BUTTER.—Western so id packed 12 to 20; Glades, 12 to

16; Goshen, — to —.

BEESWAX.—38a40 cts.

CHEESE.—Eastern, 17a18; Western, 16.

DRIED FRUIT.—Apples, 6 to 12; Peaches, 10 to 12.

Eggs.—23a28 cents per dozen.

FEATHERS.—Live Geese, 70 to 80 cents.

LARD.—Western, 12a13 $\frac{1}{2}$; City rendered, 12a14 $\frac{1}{2}$ cts.

TALLOW.—10 all cents.

POTATOES.—New, \$4.25a\$4.75 cents per bushel.

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